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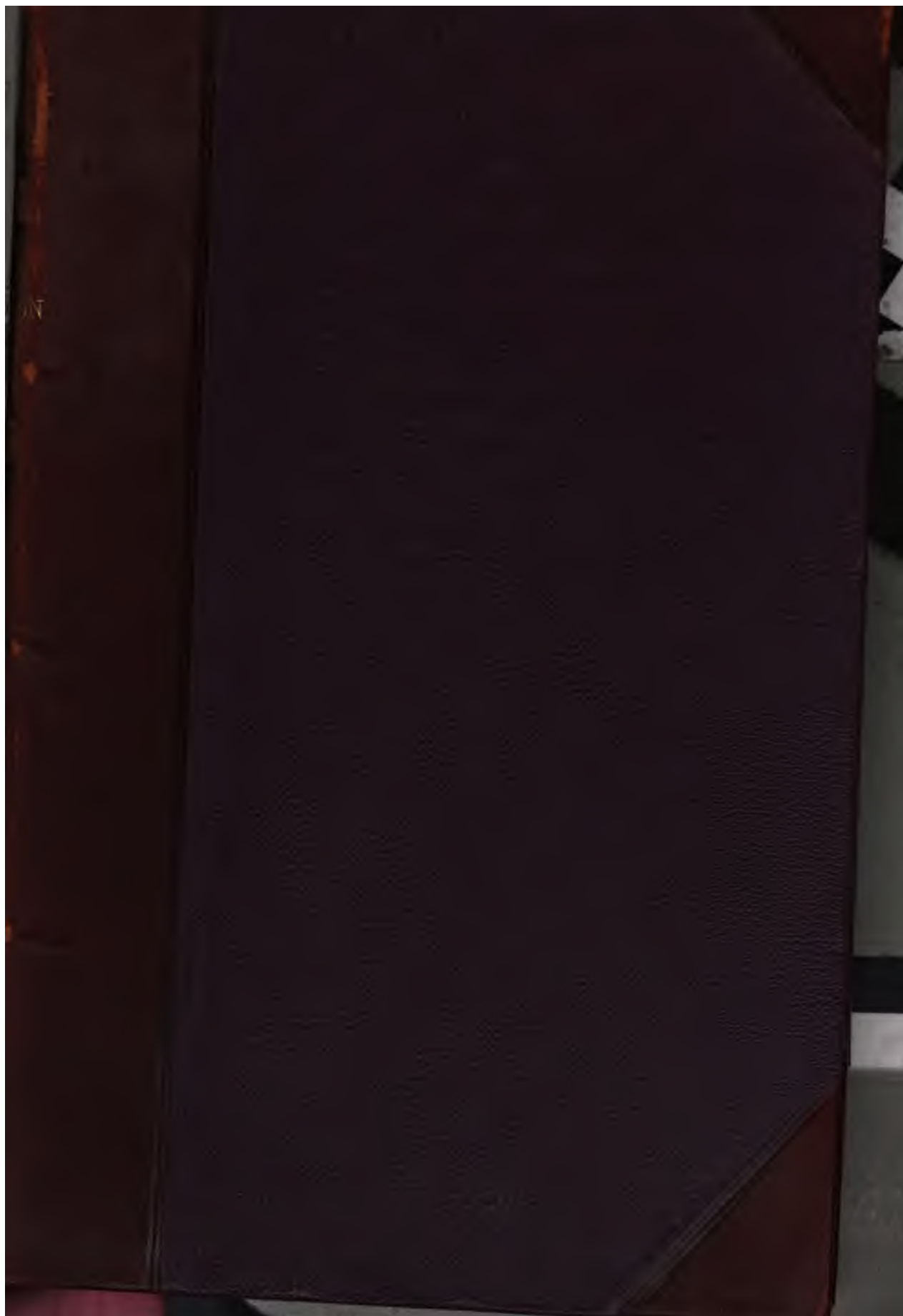
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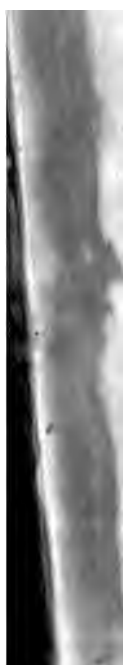
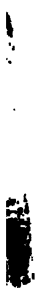
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Zoological Illustrations,
OR
ORIGINAL FIGURES AND DESCRIPTIONS
OF
NEW, RARE, OR INTERESTING
ANIMALS,

SELECTED CHIEFLY FROM THE CLASSES OF
Ornithology, Entomology, and Conchology,
AND ARRANGED ACCORDING TO THEIR APPARENT AFFINITIES.

BY
WM. SWAINSON, ESQ., F.R.S., F.L.S.
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THE WERNERIAN SOCIETY, &c. &c. &c.

VOL. I.
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1829.

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TO
MRS. CORRIE,
OF
WOODVILLE, NEAR BIRMINGHAM.

MY DEAR MADAM,

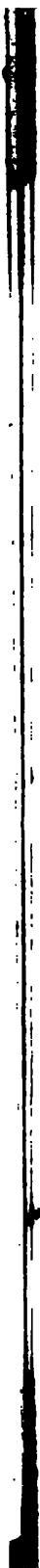
Allow me, in dedicating this volume of *Illustrations* to you, to evince my respect and friendship for one whose talents shun publicity. It may have a beneficial influence on the rising generation, to know, that a highly cultivated understanding, and varied accomplishments, are not inconsistent with a perfect discharge of all the social duties. And that a mind stored with knowledge, and imbued with Religion, is an effectual antidote to the cheerless influence of debilitated health.

That these, my *Zoological Recreations*, may in your opinion, contribute to the great end which the naturalist should ever keep in view, the development of the harmonies of Creation, and the discovery of the natural system, is the hope of,

MY DEAR MADAM,

Your obliged and sincere Friend,

WILLIAM SWAINSON.



P R E F A C E.

The execution of the Zoological drawings now published, have been to us an agreeable relaxation from severer studies; and the concise descriptions by which they are accompanied, are intended to convey, in a condensed and popular form, the partial result of more extended investigations. Species are the objects of which the whole fabric of animated nature is composed, and their respective properties must be investigated, before their natural combinations can be understood. Their delineation is therefore highly important. Figures bring before us objects which cannot always be understood by words; while if faithfully executed, they possess the same value as every period of time; for nature is unchangeable.

It is to be regretted that of late much discussion should have arisen among our own naturalists, as to the relative merits of the different modes by which they study nature. The searchers after the natural system throwing obloquy on those who investigate species,* while the latter contend that mankind is more interested in knowing the properties of species, than those of groups.† To us it appears that such discussions are unnecessary, and but ill calculated to promote that good feeling which should prevail in a division of labour. The power of embracing comprehensive views, and of detecting diversified relations, must be confined to a few, because such objects require the greatest exertion of a superior mind, yet they must ever be mainly dependant on the labours of another class of naturalists: those who analyze the properties of species, and separate with critical judgment, and nice discrimination, resemblances from affinities. But for these valuable coadjutors our acquaintance with nature would be altogether speculative: they supply,

* Zool. Journal, Vol. 4. p. 405. † Ill. of Brit. Ent. 1. p. 70.

in short, by analysis, that basis upon which all true knowledge of nature must repose. Natural combinations can never be fully detected, without an acquaintance with their component parts.

The investigator of general laws, and the discriminator of species, are thus advancing the knowledge of their favourite science by different modes of study. The paths they have chosen, although essentially distinct, lead but to one common point; and as both must be trodden, it seems unnecessary to discuss which road is the most honourable.

In the classification of the subjects here comprised, we have followed no particular system: the chief object aimed at, being to point out apparent relations and affinities. To those Ornithological groups which Linneus named Genera, and which subsequent systematists have considered Families or sub-families, we have applied the designations long used by Leach, Stevens, Fleming, Vigors, &c., but in all cases where such divisions are unaccompanied by a definition, (in the following pages,) we wish it to be understood, that the name is merely applied *provisionally*; indicating the *probable* station of the individual; and that in very few instances do our own opinions on the nature of such groups, coincide with those of the different writers who have gone before us.

The splendid discovery of the circular system of Nature, has given a totally new aspect to this science; but has nevertheless been attended with an evil, no where more apparent than in Ornithology; where synthesis has completely set aside analysis, and where the rugged and laborious path of patient investigation, has been deserted for the flowery walks of Speculation and Hypothesis. The combinations thus produced, may well excite the smile of our continental neighbours, nor need we feel surprise that they look, with something like contempt, on such arrangements "called natural" of affinities and relations.

On the other hand the Ornithological writings of Sonnini,

Le Vaillant, Wilson, and Azara, are never failing sources of information to the searcher after truth. The observations of such men, who recorded Nature as she really is, and who cared very little for the fashionable systems of the day, may be for a time neglected: but they must finally assume that importance which is ever attached to unbiassed and disinterested testimony. To this honourable list our own country can furnish other names. The habits and economy of our native birds have been accurately and patiently investigated by those lyncean naturalists, White, Montague, and Selby, while their internal structure is now engaging the attention of Mr. Yarrell, a Gentleman eminently qualified by long study, and matured reflection, for such a task.

In Conchology we have been more desirous to illustrate groups, than species; the latter will be done, on a very extensive scale, in the forthcoming work of Mess. Sowerby.

From the patient labours, and cautious deductions, of Dr. Horsfield, we expect a more perfect elucidation of the Lepidopterous Insects than has yet, perhaps, been attempted. As this will be the result of careful analysis, we shall place a high degree of confidence in the views it may develop.

In conclusion, it may be as well to add, that our views on several of the higher groups, here but slightly noticed, will be more fully explained in another work, now preparing for Publication.

W. S.

*Tittenhanger Green, St. Albans,
24th July, 1829.*

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Brazilian Crested Eagle.

Polyborus Brasiliensis.

POLYBORUS *Brazilienses*
The Caracara ; or Brazilian-crested Eagle.

Family Falconidæ.

GENERIC CHARACTER.—See Vieil. Orn. 3. p. 1180.

SPECIFIC CHARACTER.

Body above and beneath, crest of the head, and end of the tail, blackish brown : the rest of the plumage cream colour, varied with spots and bands.

Falco *Braziliensis*. *Lin. Gm.* 64.

Buzard du Brézil. *Buffon.*

La Caracara. *Azara Voy.* 3. p. 33. *Vieil. Orn.* 3. p. 1180.

Polyborus *Vulgaris*. *Vieil. Gall.* Pl. 7.

In Mus. Paris. D. Taylor.

THE whole extent of Tropical America, from Mexico to the banks of the Rio Plata, is inhabited by this majestic bird. It has been slightly noticed by the earlier writers, but nothing was known of its history, until the publication of the invaluable Memoirs of Azara.

Its length is about twenty-one inches. In its habits there is a mixture of cowardice and daring. It will attack all other rapacious birds, excepting eagles, for the purpose of robbing them of their prey, and will often seize the game of the hunter, before he has time to secure it. Yet the Caracara is frequently driven from its haunts by the courage of small birds ; and will only attack young chickens when not defended by their mother.

The birds which form the modern genera of *Daptrius*, *Ibycter*, *Polyborus*, and *Milvago*, present so many characters in common, that we cannot consider them of sufficient rank to be called genera. They appear to us, taken collectively, to form one group, in which every species exhibits a peculiar modification of structure, assimilating either to the Vultures or the Falcons. Allied both in structure and manners to both these families, each bird may be considered as a strongly marked link of connexion. They present, in short, that interchange of characters, generally confined to individual species, which Nature invariably exhibits at the union of her more comprehensive groups.

WILLIAMSON

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Sapphirine crowned Parrot
sen.

PSITTACULUS vernalis.

Vernal Parrakeet.

Family Psittacidae.—Vigors.

Genus Psittaculus.—(Lesson. Man. 2. p. 148.)

SPECIFIC CHARACTER.

Green, with the head more splendid; bill red; rump and upper tail covers scarlet; spot on the throat orange.

Psittacus vernalis. Sparman Mus. Carl. Pl. 29.

Psittacula vernalis. Gen. Zool. 14. p. 144.

THE Vernal Parrakeet has hitherto remained unfigured, except in the scarce and little known work of Sparman: nor was its native country ascertained, until recent travellers discovered it in the islands of Java and Teinor.

This is one of the smallest of parrots, scarcely exceeding five inches in length; the feathers of the head have a silky texture, and their colour, in some lights, is particularly vivid: the tail and the wings are green above, but of a rich deep blue beneath; a character said to be equally conspicuous in *P. galgulus* L. The spot on the throat, in our specimen, is orange.

In respect to the situation of this bird among its congeners, we retain it, provisionally, in the genus *Psittacula* of Brisson & Kuhl, adopting the termination used by M. Spix, to avoid the alteration of specific names. We have not yet had leisure to study the new divisions made in this family, with that attention they deserve; but it strikes us, as a defect in the genus *Psittaculus*, that it unites birds of the Old and the New World in one group. Except in their size, no two parrots can be more dissimilar in construction than the Indian *P. vernalis*, and the American *P. passerinus*. In the first, the under mandible is smallest, narrow, and rather pointed; the first quill longest; and the tail feathers rounded. In *P. passerinus*, the under mandible is largest, high, very thick, and quite obtuse; the second quill longest, and the tail feathers acutely pointed. These may be usefully employed as sectional characters, until the contents of the two groups are better understood.





Painted Flycatcher
Setophaga Picta

SETOPHAGA picta

Painted Flycatcher.

Family Muscicapidae.

GENERIC CHARACTER.—See Lesson Man. 2 p. 430.

SPECIFIC CHARACTER.

Black; breast and middle of the body crimson; greater wing covers, and three external tail feathers, snowy.

In Mus. D. Taylor.

A SPECIMEN of this richly-coloured bird was sent to John Taylor, Esq., F. G. S., &c., from Real del Monte, in Mexico. It is not only new to Ornithologists, but forms a beautiful addition to a geographic group, originally founded upon one species.

The figure is the size of life. The bristles at the bill are compact, rigid, and all directed forwards: under tail covers and thighs whitish: the white band on the wings occupies the greater covers, and the tips of the lesser: the quill covers are also margined with white: the extreme base of the three outer tail feathers are more or less black.

The characters upon which we formed this group, confine it strictly to birds of the New World. For although the habits of the typical species evince a marked affinity to the Fantailed Flycatchers of Australia, the construction of their wings is totally different. The disposition of the black and crimson colours on our bird, will remind the Ornithologist of the Red-bellied Flycatcher of Latham, of which, in fact, it is nearly an exact prototype. But this resemblance, however strong, appears to us to be one of analogy, rather than of affinity. We consequently consider the *Muscicapa Multicolor*, *Lathamii*, and *Goodenovia*, of MM. Horsfield and Vigors, as more truly belonging to the family of *Sylviadæ*.



ANCILLARIA rubiginosa.

GENERIC CHARACTER.

Shell oblong, smooth, entirely polished: suture not channelled.
Base of the pillar oblique, thickened, and striated. S.

SPECIFIC CHARACTER.

Shell imperforate, oblong, chestnut; spire elongated; body whorl above banded; base with two belts and a concave groove.
Sw. in Phil. Mag. 62. p. 403.

A. rubiginosa. Sw. in Brand's Journ., No. 36, p. 283.

THE Ancillariæ are marine shells, few in number, and peculiar to warm latitudes. They are naturally polished, and very much shaped, like the Olives; but the suture, which in those shells is marked by a deep groove, is in these covered by a thick enamel. The animal, we believe, remains unknown. In a monograph of this genus, published in the Journal above quoted, we described fourteen recent, and four fossil species, being all which, at that period, we had seen. Of these, the present is one of the largest, and certainly the most beautiful. Our figure was made from a matchless specimen, received by Mrs. Mawe from China, and now in the collection of Mr. Broderip.

We hear, with pleasure, that Mr. George Sowerby has selected this interesting group for an early illustration in his promised *Species Conchyliorum*. The professional opportunities which this zealous Conchologist enjoys will, no doubt, enable him to make considerable and valuable additions to this and every other department of his subject; and he has our cordial good wishes for success in this most laborious undertaking.

Ancillaria Pl. 1.

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MITRA melaniana.

GENERIC CHARACTER.—See Zool. Illustr. 1 Series, Pl. 23.

SPECIFIC CHARACTER.

Shell smooth, blackish brown, with very minute punctured transverse striae; spire attenuated, longer than the aperture; pillar 4-plaited.

Mitra melaniana. Lam. Syst. 7. p. 314.

M. nigra? Chem. Conch. 10 Pl. 151. f. 1430, 1431.

M. carbonaria. Sw. in Bligh. Cat. App. p. 10.

WE are acquainted with two shells, perfectly distinct as species, yet sufficiently alike to render Lamarck's description of his *M. melaniana* applicable to both. In this uncertainty, we at first intended to distinguish *this* by the name of *carbonaria*, and to consider the other as Lamarck's *melaniana*, but further consideration induces us to alter this arrangement; the second species we propose to illustrate in an early number. Our figure was taken from a full-sized specimen, received from Australia, and now in the Manchester Museum.

MITRA tessellata.

Shell ovate, smooth, with remote transverse punctured striae; whitish, cancellated by transverse and longitudinal fulvous lines; inner lip brown at the base; outer lip smooth.

Mitra tessellata. Swains. in Brand's Journal, No. 33. p. 34. (Ap. 1824.)

WE have already given a full account of this very rare shell; a repetition of which is rendered unnecessary by the publication of the figures. The specimen from which these were taken, was then in the possession of Mrs. Mawe, whose kindness and liberality, in forwarding our scientific pursuits, has been, for very many years, constant and invariable. We know not its country, nor have we ever seen a second example.

Mr. Grey has recently given an additional interest to this group, by publishing an account of the structure of the animal.

Mitra Pl. 1.



African Jacana
Parm. Africana.

P A R R A Africana.

African Jacana.

Family Rallidæ.

GENERIC CHARACTER.—*See Lesson Man.* 2. p. 285.

SPECIFIC CHARACTER.

Above deep cinnamon; crown of the head naked; throat white; breast fulvous; neck and quills black; spur on the wing obsolete.

Parra Africana. *Lath. Ind. Orn.* 2. 764.

African Jacana. *Lath. Gen. Syn.* 5. p. 246. *Gen. Hist.* 9. p. 393.

In Mus. Par. Nostro.

THE Jacanas are wading birds, somewhat analagous, both in structure and habits, to the European water-hen; but in their native haunts, from not being disturbed, they are less shy. The number of these birds on the lakes of Brazil, the elegance of their movements, and their fearlessness of man, excite an interest in the traveller who journeys through regions, ornamented alone by Nature.

Most of the Jacanas inhabit South America—a few occur in India; and this, as its name implies, is found in Africa. The typical species have the wings armed with a strong and very acute bony spur; but in *P. Africana*, this is so small, as not to be perceived when the wing is closed.—Bruce mentions this bird by the name of Meylie, as inhabiting Abyssinia; and Mr. Salt found it at Mozambique. Our specimen was received from Western Africa, by Mr. Ward, Animal Preserver, Broad Street, Golden Square.

The peculiar structure of the feet of these birds is highly singular, but their particular use has not, we believe, been explained. The Jacanas are very light birds; and their long toes, spreading over a wide surface, enable them to walk on the floating leaves of aquatic plants, with as much facility as if they were on land. In such situations their appearance is really delusive; for their pressure being sufficient to sink the supporting leaf just below the surface, the birds actually appear to walk upon the water.

Total length, ab. $10\frac{1}{2}$; bill, $1\frac{2}{10}$; wings, $5\frac{2}{10}$; tarsi, $2\frac{2}{10}$; hind toe and claw, $5\frac{1}{10}$.



AFRICAN BLACK CUCKOO.

Cuculus nigriceps.

CUCULUS nigricans.

African Black Cuckow.

Family Cuculidæ.

GENERIC CHARACTER.—See Lesson. Man. 2. 119.

SPECIFIC CHARACTER.

Black glossed with blue; quills internally white, with blackish bands; tips of the lateral tail feathers whitish; bill and legs black.

THE genus *Cuculus*, even as now restricted, contains a number of species, dispersed over the continents and islands of the Old World. In America they are not known: but the genus *Coccyzus*, which there represents the group, is one of those few which are common to both hemispheres.

The specific distinctions of birds having a uniform black plumage, is at all times difficult; and more so, when we attempt to identify them with the descriptions of authors. Of the black Cuckows of Africa, our bird comes nearest to the *Coucou criard* of Levaillant, (Ois. d'Af. pl. 204-5,) but differs in having the bill and feet black instead of yellow: it cannot be the *Cuculus Indicus niger* of Brisson, as *that* has the quills, internally, "tout à fait noir:" neither is it the black Indian Cuckow of Edwards, pl. 58, (*Cuculus niger* Lin.,) whose bill and feet are red. We were inclined to think that the second species of Buffon's *Coukeels* might be our bird, notwithstanding the difference of their locality; but Commerson's original description decides the question; his words are "*Cuculus cristatus mindanensis cœruleo nigricans totus*." (Buff. ed. Son. 54. p. 54.) Our bird has no crest. We have here consulted only original writers; for subsequent transcribers have so blended these birds under one name, that it is scarcely possible to disentangle their synonyms. M. Vieillot has increased the confusion, by transposing the specific names of Linnæus: the true *C. niger*, L. being his *Orientalis* (En. Meth. Orn. 1331).

Our bird was sent to us for examination by Mr. Ward. It is a genuine Cuckow: the nostrils being round, the third quill longest, and the second shorter than the fourth. It came from Western Africa.

Total length, $12\frac{1}{2}$; bill, $1\frac{1}{10}$; wings, $6\frac{1}{2}$; tail, $6\frac{1}{2}$.



Blue-necked Lory

, L O R I U S Isidorii.

Blue-necked Lory.

Family Psittacidae.

GENERIC CHARACTER.—Lesson. Man. 2. 148.

SPECIFIC CHARACTER.

Crimson; crown, nape, neck, throat, and middle of the belly violet blue; quill covers tipped with black; tail moderate, graduated, reddish brown.

A SPLENDID specimen of this lovely bird (the only one we believe in this kingdom), came into our possession some years ago through Mr. Warwick, a travelling naturalist of great merit. It was purchased by him, alive, in the Isle of France, where it had been brought in a trading vessel from New Guinea: but it unfortunately died on its passage to England.

We feel happy, that in recording this new and beautiful bird, an early opportunity is given us of commemorating our deep sense of the kindness we received from a young naturalist of France, whose writings have already acquired celebrity, and who promises to inherit the great and commanding talents of his illustrious father. In prosecuting our studies at the *Garden of Plants*, we met with such unexampled liberality from its most distinguished Professors, that we feel embarrassed where first to return our thanks. But the facilities and attentions we received from M. Isidore Geoffroy Saint Hilaire, partly involved a sacrifice of personal convenience; uncalled for, either by the nature of his appointment, or by the common rules of courtesy. So much for the reception which British naturalists receive in France. We should do well, when striving to imitate the Zoological Institutions of that nation, if we imbibed somewhat more of their liberality. We hope the time is not far distant, when the system of regulations and restrictions, which now fence the Museum of a popular Society, from all who cannot pay for admittance, as members, may be exchanged for a policy more creditable to the age, and more honourable to the nation.

We shall offer a few remarks, illustrating this particular genus, in our next number.

Total length, 9 in.; wings 5; tail (beyond) $1\frac{1}{2}$, from the base, $3\frac{1}{2}$.



AMPULLARIA. Pl 1

A. carinata.



AMPULLARIA carinata.

Carinated Apple-snail.

Family Ampullaridæ.—Guild.

GENERIC CHARACTER.

PACHYSTOMA. Shell ventricose; margin of the lip thick, generally grooved; operculum testaceous. Zool. Journ. 12. p. 536.

SPECIFIC CHARACTER.

Shell olive, ventricose, without bands; whorls carinated near the suture.

IN the first Series of our Illustrations, we endeavoured to lessen the confusion which, at that time, prevailed among the species of Ampullaria, figuring and naming such as appeared to us truly distinct. During the course of our labours, the sixth part of the "*Animanx sans Vetebres*" of the celebrated Lamarck was published in Paris; in which is described several species, figured in our volumes under other names. A want of mutual communication between authors writing at the same time, and on the same subject, has naturally caused confusion in nomenclature; which, at an early period, we intend to elucidate.

Our friend the Rev. L. Guilding, whose accuracy of observation can only be equalled by his indefatigable zeal, has established the distinction between the horny and shelly operculated *Ampullariæ*, on anatomical principles. The present species (which was engraved before his valuable memoir was published) must consequently be placed in his genus *Pachystoma*; while the *carinata* of Lamarck, from having a horny operculum, remains with the true *Ampullariæ*.

We know not the precise locality of our species; but conjecture it may be from some of the rivers of India.—Specimens, in different stages of growth, are in the Manchester Museum, and in our own.

Ampullaria Pl. 1.



URBIO PL 1
u. truncatus

U N I O truncatus.
Truncated River Mussel.

Acephala Dimyaria.
Sub-family Les Nayades.—*Lam.*

SYNOPSIS OF THE GENERA.

- UNIO. Shells with lateral and cardinal teeth, the latter short and deeply divided.
HYRIA. Lateral and cardinal teeth distinct; but the latter lengthened, and united to the former by irregular dentations.
IRIDINA. Teeth consisting of a single crenated line, parallel with the ligament.
ANODON. All the teeth either obsolete, or entirely wanting.
ALASMODON. Lateral teeth none; cardinal teeth simple, or slightly divided.
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SPECIFIC CHARACTER.

Shell thick, oblong, sub-cylindrical, within pearly, umbones close to the anterior margin, which is truncate; posterior extremity narrowed.

IN our former Series, we have frequently mentioned the Fluviate Bivalve Shells, of which the genus *Unio* appears to be the type. In a group which present so few certain characters, either for discriminating the species or characterizing the genera, we have, with other writers, held different opinions at different times. And the reader has only to peruse an interesting paper on these shells, in the *Zoological Journal* (Vol. I. p. 53), to be convinced of the intricacy of the subject.

Nevertheless it is observed, by those who study natural affinities, that when the links between two distinct forms of animals are so complete, that their dissimilarities are lost in intermediate and undefinable gradations, it is then that the natural arrangement is most likely to be discovered. For it has been demonstrated in such groups, that the most perfect order and harmony will come out, of what appeared an inextricable entanglement of relations. Such, however, will never result from the belief in a simple scale of Nature, or by attempting to circumscribe groups by absolute characters. We therefore now offer the foregoing sketch of the natural divisions of the *Nayades*, as the result of all we have seen or read upon this difficult subject.

We are unacquainted with any described species to which the shell here figured can be referred. Its substance is very thick, and its form nearly cylindrical. We have seen but one specimen, and that was with Mrs. Mawe.

Unio Pl. I.

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WHITE-BREASTED WREN

Troglodytes aedon

THRIOTHORUS Mexicanus.

Mexican, or White-throated Wren.

Family Certhiadæ.

GENERIC CHARACTER.—Vieil. Orn. 2. 627.

SPECIFIC CHARACTER.

Brown, varied with dusky lines and white dots; throat and breast snowy; tail ferruginous, with black bars.

Mus. D. Taylor.

IN the collection of Birds before alluded to, formed by the late Mr. John Morgan at Real del Monte, was a single skin of this new and elegant species. The snowy whiteness of its throat, renders it not liable to be mistaken in a group of birds, presenting in general a great similarity of plumage. The upper parts are greyish brown, varied with obscure, dusky, broken lines of blackish; each feather being tipped with a small round white spot: wing covers and tertials the same: upper and under tail covers ferruginous; each feather with a white spot before the white one which is at the tip, lower breast and all the under plumage rufous brown, crossed by black lines; the white dots nearly obsolete, tail ferruginous, with about six black bars: legs brown, hind claw as long as the tarsus. Fourth and fifth quill longest.

This genus has been judiciously separated by M. Vieillot from *Troglodytes* (to which belongs our Brown European Wren), on account of its lengthened and generally notched bill: the greater prolongation of the hind toe is a further distinction; indicating an affinity with the more perfect scansorial Creepers.

To this group belongs the *Myothera obsoleta* of Prince Charles Bonaparte. No example of that genus, or of *Thamnophilus* (in their most extended sense), has yet been found north of Cuba: their straight, cylindrical, and abruptly-hooked bills, offer a striking contrast to the lengthened, compressed, curved, and consequently feeble structure of this part in *Thriothorus* and *Troglodytes*.

Total length, $5\frac{1}{2}$; bill, $1\frac{1}{10}$; wings, and tail, $2\frac{8}{10}$; tarsi, $\frac{7}{10}$.

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LORIUS garrulus.

Ceram Lory.

Family Psittacidæ.

GENERIC CHARACTER.

Bill moderate, compressed, end of the upper mandible, within, entirely smooth; under mandible lengthened, conic; the tip entire. Legs stout; Tail moderate, rounded or graduated; the feathers broad, their tips obtuse. *Nob.*

SPECIFIC CHARACTER.

Scarlet: wings green, shoulders yellow, half of the tail bluish black.

Psittacus garrulus. Lin. 144. *Kuhl. Cons. Psit.* p. 41. No. 56.

Le Lori-Noira. Buffon. *Sonn.* 27. p. 126. *Pl. Enl.* 216.

Le Perroquet Lori Nouara. Levaill. 2. pl. 96.

Scarlet Lory. Edw. pl. 172.

Le Lory de Ceram. Briss. *Orn.* 4. 215.

THE popular name of Lories has long been given to those Parrots, peculiar to the continent and islands of India, whose brilliant red plumage forms a strong contrast to the green colour which generally pervades this family. The southern limits of their distribution do not extend to Australia, but much of their general structure is transferred to the Lory-Parrakeets, forming the modern genus *Trichoglossus*; this latter group being diffused over the remaining islands of the great Pacific Ocean.

The Ceram Lory, from being well known, and exhibiting the prominent characters of its tribe, is a correct type of the genus. Its length is about eleven inches. The general colour is rich scarlet, with the wings and thighs green: the bend of the shoulder, (and sometimes a spot on the back,) is yellow. Tail graduated, the lower half of the feathers deep blackish green, glossed with blue. Inhabits the Molucca Islands.

Notwithstanding the attention recently bestowed in characterizing the groups of this family, the most important external peculiarity of *Lorius* and *Trichoglossus* has been overlooked. In these birds, that part of the roof of the under mandible which projects beyond the lower, is generally thin, and always perfectly smooth: a weakness of structure which renders it impossible for these parrots to feed upon hard substances; and betrays their frugivorous and suctorial nature, by indications perceptible to every one.





LEVAILLANTS CUCKOW.

Coccyzus Levaillanti.

C O C C Y Z U S Levillantii.

Black and White-throated Cuckow.

Family Cuculidæ.

GENERIC CHARACTER.—Lesson. Man. 2. 120.

SPECIFIC CHARACTER.

Head crested, the feathers pointed; plumage above black glossed with green; band at the base of the quills, end of the tail, and under parts of the body, white; throat striped with black.

Variete du Coucou Edolio, *Le Vail. Ois. d'Af. 4. pl. 209.*

UNLIKE the true Cuckows, the birds of this genus rear and provide for their young in the ordinary manner. The species are numerous in the tropical latitudes of both hemispheres. Two are found in North America, which, in their external characters, approach so near to the genuine Cuckows, that they barely come within the definition of the present group.

It frequently happens that species, originally well described, become involved in obscurity by compilers. Le Vaillant, who first described this bird, supposed it a variety of his *Coucou Edolio*: but in this he was mistaken; the one being a *Cuculus*; the other a *Coccyzus*. We should have thought our species might be the *Cuculus Afer*. of Drs. Leach and Latham, had not the former stated his bird to be a *variety* of Le Vaillant's, and figured it as an example of the genus *Cuculus*. Dr. Latham (Gen. Hist. 3, 290) copies this description of *C. Afer*. (Zool. Mis. 1. p. 31), adds some further characters not seen in our bird, and, under the same name, describes what is evidently another species. Lastly, M. Vieillot, in his account of the genus *Coccyzus* (Orn. Ency. Meth. p. 1842), relying on the usual accuracy of Le Vaillant—and never, perhaps, having seen the bird—omits it altogether. To prevent this confusion extending further, and to detach the species from those dubious descriptions with which it has been mixed, we have thought it best to record it by the name of its first describer.

Our figure will render a detailed description unnecessary: the wings, although long, are rounded; the fifth quill being the longest. The total length is fifteen inches. Inhabits Senegal, and the Western Coast of Africa.

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MARMAROSTOMA. PL. I.

M. scutellata

M A R M A R O S T O M A undulata.

Waved Pearl Snail.

GENERIC CHARACTER.

Shell turbinated, ponderous, the whorls generally angulated, the substance pearly: aperture circular, closed by a testaceous operculum: umbilicus none.

Type, *Turbo chrysostomus*. L.

SPECIFIC CHARACTER.

Shell angulated, variegated with green and brown undulated stripes, summit of each whorl coronated.

FROM the genera *Turbo* and *Trochus* of modern Conchologists, we have detached all those species whose shells are closed by a calcarious operculum; and this group we propose to distinguish by the name of *Marmarostoma*. The species, like the *Trochi*, properly so called, are all of a pearly structure; but their substance is much thicker; the base of the shell is slightly produced; the exterior surface is marked either with tubercles, grooves, or elevated ridges; and the aperture (from the convexity of the last whorl) forms a circle. If the student compares these characters with *Trochus Zizyphinus*, a common British shell, he will immediately perceive the leading differences between the two groups.

But it is the calcarious nature of the operculum (as indicating an important difference in the organization of the animal) which constitutes the primary character of *Marmarostoma*: the particular structure of this appendage varies considerably in the different species: in some its outer surface is smooth and convex; and in others variously granulated. In the present shell it is marked by three or four deep semicircular grooves; that nearest the middle is the deepest, and terminates in an umbilicus. In some specimens, the spines on the principal ridge of the body whorl are nearly obsolete; but those which crown the summit appear constant.

We are indebted to the Rev. Mr. Bulwer, a scientific and arduous Conchologist, for our specimens of this new species, purchased by him in a collection sent from Panama.

Marmarostoma Pl. 1.





VOLUTA. Pl. 1.

V. bullata.

VOLUTA bullata.

Bulla-shaped Volute.

GENERIC CHARACTER.—Zool. Ill. 1 Series, pl. 161.

SPECIFIC CHARACTER.

Shell oval, smooth, fulvous, marked by zigzag darker lines; spire short, papillary; outer lip ascending towards the spire; base of the pillar with two strong plaits.

Mus. D. Broderip.

AMONG the shells which formed part of the African Museum, exhibited and finally sold in London some few years back, was a single specimen of this new and curious Volute. Worn and battered by the friction of the waves, it still retained its colour and markings sufficiently distinct to admit of a tolerably accurate delineation. The only part we have ventured to restore is the contour of the outer lip, which we have adapted to the lines of growth. The middle figure represents the shell in its broken state; and this clearly shews the ascending of the lip towards the spire, in the same manner as in *V. lapponica*.

The affinities which are suggested by the peculiar structure of this shell, are curious. In its general shape, and in the number of its plaits, it is obviously allied to *Voluta Nucleus, harpa*; *lyræformis*, &c., where the two last plaits of the pillar are very thick, and those above either small or evanescent; but from such, our shell differs materially by being quite smooth, and in having a short obtuse spire. We do not believe that this part has received much injury. The suture is perfect to the very end: further evidence may be drawn from the extreme narrowness of the third spiral whorl; a formation which only belongs to papillary spired shells. This character, joined with the smoothness and size of the body whorl, shews a closer approximation to the Melon shells, than to any other division of the group. Three or four intermediate forms are alone wanting to complete the double series.

Mr. Broderip, who is in possession of this shell, has recently arranged the Lamarkian *Volutæ* into very natural groups; two of which are considered as holding the rank of genera.

Voluta Pl. 1.

100





Mustache Parakeet.

P A L E O R N I S Pondicerianus.

Pondichery, or Mustachoe Parrakeet.

Family Psittacidæ.

GENERIC CHARACTER.—Zool. Journ. 2, p. 46.—Less. Man. 2, p. 145.

SPECIFIC CHARACTER.

Green; head pale bluish; frontal line and stripe on the lower jaw black; wings with a central spot of yellowish; breast pale red.

Le Perruche a moustaches. *Buffon. Sonn. 27, p. 185, Pl. Enl. 517.*
— a poitrine rose. *Levail. Pl. 31.*

P. Pondicerianus. *Kuhl, Nova Acta, &c. No. 48*.*

Paleornis Pondicerianus. *Vigors. Zool. Journ. 2, p. 64.*

THE Ring-necked Parrakeets of India, and the Asiatic Islands, are now considered as forming a particular genus. The geographic distribution of the group, and the characters of the species, have been detailed with much skill and classic erudition, in the Zoological Journal.

Among the numerous ornithological facts, which the distinguished liberality of MM. Cuvier and Geoffroy St. Hilaire enabled us to ascertain, during a course of study at the Royal Museum of Paris, is one that relates to this species. Specimens in that noble collection, both from Pondichery and Java, enable us to affirm, that the *Psittacus Osbeckii* and *Pondicerianus* of authors, are one and the same species.

Notwithstanding the frequency of this bird in Java, and other parts of India, we are completely ignorant of its natural history, of those diversified habits, and modes of living,—in short, of that knowledge, which gives such an animating charm to natural history, which manifests the provision of the Almighty for all His creatures, which can be known and understood by all, and which prompts the heart to contemplation and praise. Is there no one, in all our vast Oriental territory, to record something of the feathered inhabitants of the Eastern World? Is there not, throughout India, even *one* of our countrymen, imbued with the spirit of a Wilson, a Levaillant, or an Audubon?



WHITE BANDED SWALLOW.

Icterus parula.

HIRUNDO fasciata.

White-banded Swallow.

Family Hirundinidæ.—Sub-Fam. Hirundina.

Feet slender, perching, the outer and middle toes connected at the base: bill entirely depressed. *Nob.*

GENERIC CHARACTER.

G. HIRUNDO.—Lesson. Man. 1, 419.

SPECIFIC CHARACTER.

Glossy blue black: thighs and band on the abdomen snowy.

Hirundo fasciata. Lath. Ind. Orn. 2, 575.

L'Hirondelle a ceinture blanche. Buffon. Pl. Enl. 724, f. 2.

White-bellied Swallow. Lath. Gen. Syn. 4. 567.

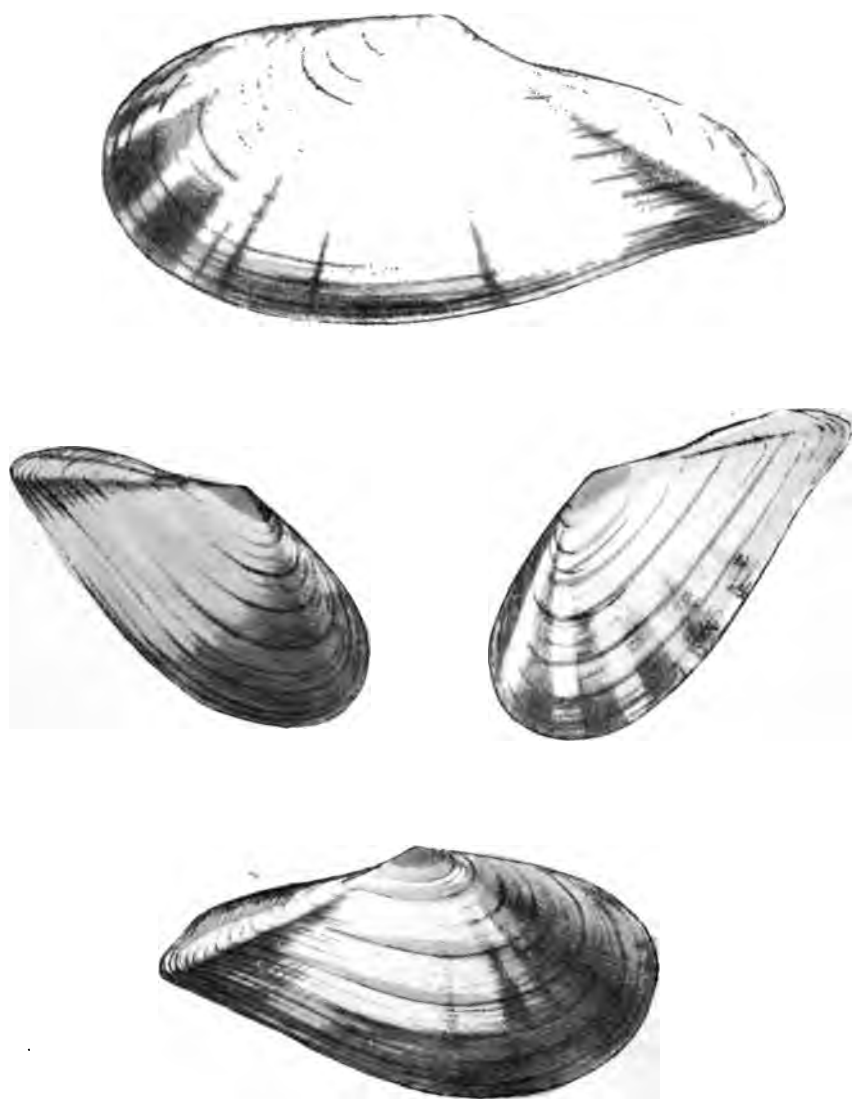
THIS elegant bird, although mentioned by several writers, is of great rarity. So seldom, indeed, is it seen in collections, that we never beheld a specimen prior to our visit to the Royal Museum of Paris, where our drawing was made. Buffon's description seems to have been transcribed by all succeeding writers; and the only figure hitherto published is that at Plate 724 of the Planches Enluminées.

The habits of the Swallow tribe are known to every one. Like the Flycatchers, they feed upon insects captured on the wing; but these insects are of so small a size, that they are swallowed during the flight of the bird. This at once accounts for Swallows not being provided with those stiff bristles, for confining the struggles of their prey, which are so essential to the Flycatchers. These latter birds frequently feed upon insects much too large to be swallowed at the moment of capture; they therefore hold their prey until they again perch, and swallow it when at rest.

The figure is the size of life. Excepting the band on the body, and the spot on the thighs—both of which are snowy white—the whole plumage is of a deep black, richly glossed with dark blue. The first quill is longest, and the tail is deeply forked.

According to Buffon, this bird is sometimes seen perched on floating trees in the rivers of Guiana and Cayenne.





TELLINA P.L.

T. latirostris.

T E L L I N A latirostra.

Wide-beaked Tellen.

Order Acephala.—Tribe Dimiaria (*Nob.*).

GENERIC CHARACTER.—Lam. Sys. 5, 519.

SPECIFIC CHARACTER.

Shell oblong; anterior side narrowed and angulated; both valves glossy, smooth, equally convex, and marked by very delicate radiating striæ.

T. testâ oblongâ, purpurascente, subradiatâ, anteriùs sinuato-angulatâ, rostri margine infimo ascendente. Lam. Syst. 5, p. 523.

THERE are few groups in Conchology, more particularly among the bivalve shells, possessing so great a union of delicacy and beauty as the Tellinæ; and perhaps there is none in which the species, from their general similarity of shape, and variability of colouring, are so little understood. For these reasons, we intend to illustrate this elegant genus very fully.

The *Tellinæ* appear to hold a station with the most typical groups of the Bivalve Mollusca; or those in which the animal can freely remove, from place to place, by the foot. In all such the shells are solid, regular, and not attached to other substances.

We select the *Tellina latirostra* of Lamarck for our first subject. As a species it has not been figured; while the original description, which we have transcribed, is so slight, that some uncertainty exists as to the precise species intended by the writer. That to which we here apply the name, is certainly very like, as Lamarck observes, to *T. rostrata*; although his description, in other respects, is applicable to other species now before us. Our *Tellina latirostra* is not common, although we once received a considerable number from Amboyna. Its surface is very smooth, but the delicate striæ, which can scarcely be seen by the naked eye, become perfectly clear under a common lens. The Manchester Nat. Hist. Society is in possession of a lovely series, exhibiting the following variations of colour: 1, pure white; 2, rose-coloured round the umbones, paler beyond; 3, entirely rose colour; 4, blush white, with a rosy shade on each side the umbones; 5, pale orange; 6, buff yellow, resembling *T. depressa*. In all these the points of the umbones are invariably white.

Tellina, Pl. 1.





Anodon, Pl. 1

A. areolatus.

A N O D O N areolatus.

Areolated Horse Mussel.

GENERIC CHARACTER.

See Unio, Pl. 1.

(Anodon. Iridina. Dipsus. Auct.)

SPECIFIC CHARACTER.

Shell transversely oval, not winged, umbones small, ventricose, not touching; with a short undulated projection of the hinge margin in one valve, and a corresponding concavity in the other; both placed beneath the umbones.

THE principal character of *Anodon*, rests on the absence of teeth; the *A. anatinus*, common to our rivers and ponds, being taken as the type of the group. But, as Nature steps progressively, in her departure from one form, and in her advance to another, so among the Anodons we find several shells, which do not strictly exhibit the typical character; and these we shall briefly notice.

In the sketch already given of this group, we have placed the genus *Anodon* between *Iridina* and *Alasmodon*. The *Iridina nilotica* Sow, "has scarcely any appearance of crenations along the hinge line," but for this, it consequently would present a simple lamellar ridge, extending nearly the length of the shell; such, in short, as is seen in *Dipsus plicatus* (Leach), whose tooth may be so described. By this shell we are led to *A. rubens* Lam. where a lamellar plate, though much shorter, is placed beneath the umbones. *Iridina Cailliandi* perfectly resembles *A. rubens*, except in being without any vestige of this plate. We have now entered among the typical species, where every form occurs between a round and an ensiform shape. Leaving these, Nature proceeds to fashion an indistinct development of *Alasmodon* in the species before us, where that part of the hinge plate, immediately beneath the umbones, is somewhat raised, and undulated. In *A. rugosus* these compressed undulations assume more the form of tubercles; and finally, in the *Alasmodon marginatus* of Say, the teeth are sufficiently developed to place that shell in a distinct group.

Our esteemed and accomplished friend, Mrs. Corrie of Birmingham, favoured us with two examples of what appears to be a variety of that which we have figured. The substance of both is opaque; the inside white, tinged with buff, and with scarcely any pearly lustre. Inhabits North America, but we know not any precise locality.

Anodon, Pl. 1.



MITRA. Pl. 2.

1. *strigata*. 2. *bicolor*. 3. *carinata*.

MITRA strigata.

SPECIFIC CHARACTER.

Shell very smooth, chestnut with paler longitudinal stripes, which are white at their commencement; aperture white, shorter than the spire; pillar 4-plaited.

Mitra strigata. Sw. in Brand's Journ., No. 33, p. 37, Ap. 1824.

THE Conchologist will find a full description of the three Mitras here figured in the Journal above mentioned. They are all of singular rarity, more particularly *strigata* and *carinata*, as of these we have never seen second specimens. *M. strigata* belongs to that group which contains *M. melaniana*, *scutulata*, &c. Its country is unknown.

MITRA bicolor.

Shell smooth, polished, fusiform, white, with a brown central band; upper part of the body whorl and spire with cancellated punctured striæ: base with simple striæ.

THIS pretty shell seldom exceeds three-quarters of an inch in length; our figure is consequently enlarged: the pillar has four plaits. This, in conjunction with *M. casta*, *olivaria*, *dactylus* (Lam.), and *olivæformis* (Sw.), constitute a particular group, allied to *Conæhelix*, having the plaits extending far beyond the aperture.

Inhabits the South Seas. In the Manchester Museum, and in our own.

MITRA carinata.

Shell slender, fusiform, brown; whorls with a single carinated ridge, and striated transversely near the suture; pillar 4-plaited.

THE habit of this Mitra will place it with the fusiform species; from all of which, however, it differs in not having exterior plaits, nodules, or impressed sculpture. The aperture is smooth within, and white. We have only seen one specimen, received by Mrs. Mawe, from Sierra Leone, and this was covered with a brown epidermis.

Mitra Pl. 2.





Blue-winged Parakeet



NANODES venustus.

Blue-fronted Parrakeet.

Family Psittacidae.

GENERIC CHARACTER.

Bill entire; the lower mandible short, deep, thick, and rounded; nostrils very large, fleshy, naked; wings pointed; tarsi, toes, and claws very slender—the former manifestly longer than the hind toe; tail cuneated; the feathers narrow and lanceolate. *Nob.*

Type.—*Psittacus pulchellus*.—Zool. Ill. 2, Pl. 73.

SPECIFIC CHARACTER.

Sides of the head yellowish; front with a blue band; wing-covers and tail blue, the latter tipped with yellow; throat and breast deep green; belly yellow.

Psittacus venustus. Linn. Trans. (Temm.) xiii. p. 121.

——— *chrysostomas*. Kuhl. Nov. Act. p. 51, Pl. 1.

Nanodes venustus. Linn. Trans. (Vig. and Hors.) xv. 274.

THE Ground Parrakeets of Australia, of which this is one of the most beautiful, form a small but richly coloured group of birds, remarkable for the peculiar structure of their feet, which leads them to frequent the ground more than any of their family. In the form of their bill, wings, and tail, they exhibit a close resemblance, in miniature, to the Maccaws of the New World, and may justly be supposed to represent those birds in the Southern hemisphere.

We received two specimens of the Blue-fronted Parrakeet, some years ago, from Van Dieman's Land; yet even there it is considered scarce; nor did we observe it in any of the collections in Paris.

Assenting, in a great measure, to those general principles of arrangement which several eminent Ornithologists have proposed regarding this family, we nevertheless consider that the succession of affinities, and even the nature of the leading groups, are not yet correctly understood. In the present case, we would rather have seen *Nanodes* placed as a sub-genus to *Pezoporus*; from which it merely differs in the comparative shortness of the feet. The connexion between the two forms, moreover, is so close as not, in our judgment, to admit the intervention of *Platycercus*, or any other group yet discovered.



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Yellow-shouldered Oriole.
1 Cayanaensis.

ICTERUS Cayanensis.

Cayenne Hangnest.

Fam. Sturnidæ.—Sub-Fam. Icterina (*Nobis*).

Bill lengthened, conic, acute, entire, the commissure not sinuated.

Tarsi short, adapted for perching; claws strong, fully curved.

GENERIC CHARACTER.

Bill black; both mandibles slightly bent; nostrils furnished with a membrane; tail lengthened, graduated; wings slightly rounded. Nob.

SPECIFIC CHARACTER.

Black, not glossy; lesser wing-covers above yellow, beneath black margined by yellow; legs bluish.

Oriolus Cayanensis. Lin. 1. p. 163.

Xanthornus Cayanensis. Brisson. Orn. 2. p. 123. pl. 9. f. 2.

Carouge de St. Thomas. Pl. Enl. 535. f. 2.

Yellow-winged Pye. Edwards, pl. 322?

In Mus. Nost.

THE Starlings of the old continent, are represented in America by a tribe of birds formerly denominated Orioles, but which we shall distinguish by the name of Hangnests. They are gregarious and noisy; living both upon insects, fruits, and grain. Their nests are purse-shaped, woven with great dexterity, and generally suspended from the extreme branches of lofty trees.

Much has been done to illustrate the affinities of these birds, and to define the species; but both are imperfectly known. Regarding their natural arrangement, our own views are quite at variance with the ingenious theory of Mr. Vigors; and as to the species, the bird before us is a curious example of error.

The true *O. caynensis*, in the best modern systems, has been lost sight of; and, under the new name of *chrysopterus* (Vieil. Wagler.), has been confounded with three others, one of which is a *Xanthornus*, one an *Icterus*, and one an *Agelaius*! The only authentic synonyms, which can therefore be consulted for our bird, are those we have quoted.

Cassicus, *Cassicolus*, *Xanthornus*, and *Icterus* are the only published genera which will come within our definition of the *Icterinæ*.

Total length, 9 in.; bill, 1; wings, 4; tail $4\frac{1}{10}$; tarsi, $\frac{8}{10}$.



Long leg'd Ant Thrush
(*H. grallatoria.*)

DRYMOPHILA longipes.

Long-legged Ant Thrush.

Family Meruladæ.

Sub-family Myotherina.

Legs long, adapted for walking; wings and tail short, the latter weak, rounded or even, but never forked or divaricated; claws but slightly curved. *Nob.*

GENUS DRYMOPHILA.—Lesson. *Man.* 1. p. 196.

D. longipes. Above rufous; sides of the head cinereous; throat and breast black; body beneath white; tarsi long, pale.

Sw. in Zool. Journ. 2. p. 152. *Gen. Zool.* 13. 2. 179. *Lesson. Man.* 1. p. 196.

In Mus. Nost.

THE Ant Thrushes, as originally defined by us, constitute a natural group of Birds peculiar to, and very abundant in, the tropical regions of the New World. They are found only in the deep shades of forests, seeking their nourishment on the ground, from ants and other terrestrial insects. Beyond such retreats they never venture, and thus their natural love for seclusion has prevented us from knowing more of their economy.

The species are numerous: our own cabinet contains fifteen: but nearly double that number are among the rich and surpassing treasures of the Royal Museum at Paris. Of that here figured, we have never seen a second specimen.

In the form of the bill, and the elongated lax plumage of the back, *Drymophila* bears a close resemblance to the smaller species of Bush Shrikes (*Thamnophilus*), but the construction of the feet—adapted in one for perching, and in the other for walking—will sufficiently distinguish these groups.

The specific name of *grallaria*, engraved on the plate, was inadvertently changed for that of *longipes* in the published account. The figure represents the natural size.

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Lingula nana.



L I N G U L A anatina.

Class Mollusca.—Order Brachiopoda (*Macleay*).

GENERIC CHARACTER.—Lam. Sys. 61, 257.

SPECIFIC CHARACTER.

Valves of equal breadth, much depressed, and longitudinally sulcated; the basal extremities approximating.

Lingula anatina. Cuv. *Bulletin*, No. 52*. *Ann. du Mus.* v. 1, p. 69*. *Lam. Syst.* 61, 258.

Lingula anatina. Sw. in *Phil. Mag.* 62, p. 403, Dec. 1823.

Icones. *Ency. Meth. Pl.* 250, f. 1, a, b, c. *Chemn. Pl.* 172, 1675, 1677. *Seba.* 3 tab. 16, f. 4*.

THE nature of the animal inhabiting the shell of *Lingula* remained unknown, until the illustrious Cuvier detected its affinity with *Terebratula*, *Crania*, and those singular bi-valve shells forming the order *Brachiopoda* of Mr. Macleay. The valves have neither teeth or ligament, but are united by muscles, and supported on a fleshy peduncle, three or four inches in length, by which the animal is attached to marine bodies.

We believe that under the common name of *Anatina*, two species have been included. Their respective peculiarities were published, some time ago, in the *Journal* above alluded to; and are now more fully illustrated by figures, and by such specific distinctions as are exhibited by the shells. Both species appear to inhabit the Indian Ocean.

L I N G U L A hians.

Valves narrowed towards their base, convex, and generally smooth; both extremities widely gaping.

WE do not recollect to have seen this species so frequent in collections as the preceding; it is always smaller, more convex in the middle, and generally smooth. Mrs. Mawe favoured us with fine specimens of both, for delineation.

Lingula, 2 Pl.



Macaw (Macaw Peruvian)

PLATYCERCUS scapularis.

Tabuan, or King Parrakeet.

Family Psittacidæ.

GENERIC CHARACTER.—Lesson. Man. 2, 146.

SPECIFIC CHARACTER.

Green; head, neck, and body beneath scarlet; lower part of the back blue; scapular covers with a pea green stripe; tail black.

Tabuan Parrot. *White's Voyage*, pl. in p. 168 (male).

Grande Perruche à collier et croupion bleus. *Le Vail. Par.* pl. 55.


Platycercus scapularis. *Vig. and Hors. Linn. Trans.* 15, 1, 284.

GREATLY allied to the Ground Parrakeets of Australia, but differing from them in many particulars, are the Broad-tailed Parrakeets of the same region, forming the modern group *Platycercus*. The former appear to represent the Maccaws; while the latter exhibit many strong points of analogy to the Lories; but we question if their resemblance extends further.

We have had one of these beautiful Parrakeets in our possession, alive, for many years. Its manners are gentle and timid. Like many of its congeners, it delights to wash itself in a basin of water. In the day, and during winter, it is generally silent; but on a mild evening it will go on, for two or three hours, with a somewhat whistling note; sometimes shrill, but generally soft and pleasing. Its ordinary diet is moistened bread, with a little hemp and canary seed; but during summer and autumn the small garden fruits appear to be highly welcome to our elegant little favourite.

Our figure represents a variety of the male bird, wherein the light green on the scapular feathers is wanting. The total length is about sixteen inches.

We consider the primary divisions of the *Psittacidæ*, are those which have long been recognized under the familiar names of Maccaws, Cockatoos, Parrots, Lories, and Parrakeets. Such a series is the result of a synthetical investigation we have given to the subject; but this mode of inquiry is so deceptive, and has led to so many erroneous conclusions, that until each of these groups are submitted to a patient analysis, which has never yet been done, no correct opinion on the subject can be formed. The name on the Plate (engraved five years ago) is a mistake. The first description and figure of this bird is in "*White's Voyage to New South Wales*," where it is described as not uncommon.







White-shoulder'd Tit Thrush.
(*M. Bianca.*)

DRYMOPHILA trifasciata.

White-shouldered Ant Thrush.

SPECIFIC CHARACTER.

General plumage black; with the shoulder covers, interscapulars, and two bands on the wing covers, snowy.

D. trifasciata. Swains. in Zool. Journ. 2, p. 152. Gen. Zool. 13, 2, 179. Lesson. Manuel. 1, p. 196.

In Mus. Paris. Nostro.

We found this remarkable bird not uncommon in the thick Forests of Pitanga, near Bahia, during our travels in Brazil in the years 1815-7. Yet although the male birds were frequent, we were never fortunate enough to procure a female. It has likewise been found in the southern provinces of that empire, by Dr. Langsdorff.

Its total length is about seven inches; the whole plumage, with the exception of the snowy bands on the wings, is intensely black: the white spot on the back is only seen when the feathers are raised: the irides, in the live bird, are of a beautiful crimson.

My friend M. Lesson, conjectures truly in thinking, that the birds placed by M. Temminck in our genus *Drymophila*, have no connexion or analogy with those species we have described, or with the characters on which we originally founded the group: they belong, in short, to a different family.



Red-headed Tanager.
T. Gyrola.

AGLAÏA Gyrola.

Red-headed Tanager.

Family Fringillidæ?—G. Tanagra. *Auct.*

Aglaïa. *Lesson. Man.* 2, 423.

Bill small, short, compressed; nostrils concealed by velvet-like feathers. Wings rather lengthened, pointed; 2, 3 and 4 quills equal and longest. Tail even.

Type.—*Tanagra Tatao*.—Lin.

SPECIFIC CHARACTER.

Vivid green, sometimes varied on the breast with blue: the whole head bright rufous, bordered round the neck with a narrow golden ring.

Tanagra Gyrola. *Lin.* 1, 315. *Lath. In. Orn.* 1, 427.

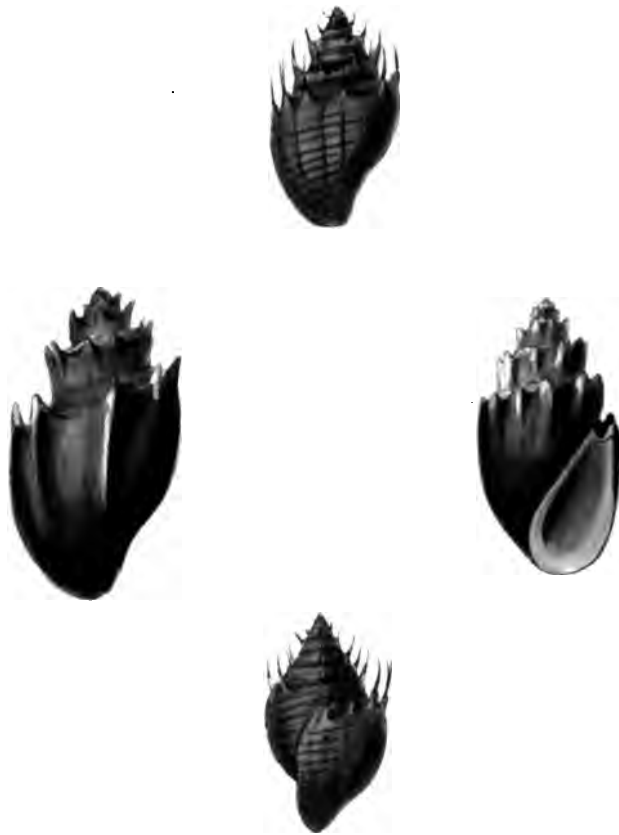
— *Desmarest Tan.* pl. 15. *Vieil. Orn.* 2, p. 778.

Le Rouverdin. *Buff. Son.* 12, p. 341. *Pl. Enl.* 133, f. 2. *Edu.* pl. 23.

Red-headed Tanager. *Lath. Syn.* 3, 233. *Gen. Hist.* 6, 16.

THE splendid little birds arranged under this group belong exclusively to Tropical America. They are generally seen in pairs, frequenting open woody tracts; feed principally upon fruits, and seldom if ever perch upon the ground: In the variety, and richness of their colours, they are only surpassed by the Humming Birds.

The Red-headed Tanager has never, we believe, been found in Brazil; although it occurs in Cayenne, Surinam, and some of the West India Islands. Buffon was its first describer; he informs us that in French Guyana it appears in small flocks, two or three times in a year; arriving when the fruit of a particular tree is ripe, and departing when it begins to fail. Some specimens are more brilliant than others, originating probably from age or locality: those from Cayenne are known by a delicate blue tinge on the breast. A further variety has been described (*Ency. Meth.*), in which the upper part of the neck is also red, and the back marked by a large spot of dull rufous (*brun-marron*). We suspect this will prove a distinct species. The rank of this group, whether as generic or subgeneric, can only be determined by analyzing the whole family.



MELANIA PL. I.

1. *setosa*. 2. *amarula*

MELANIA amarula.

Order-Phytophaga. (*Gasteropoda*, Cuv. Pars.)

Molluscæ destitute of a syphon, but furnished with jaws, and generally enclosed in a univale shell, with an entire aperture.

GENERIC CHARACTER.

See Lam. Sys. 6, 2, p. 163.—Dubois Trans. 193.

SPECIFIC CHARACTER.

Shell ovate-conical, blackish, upper part of the whorls armed with solid porrect spines; aperture bluish white.

M. amarula. Lam. Sys. 6, 2, p. 166. Chemn. pl. 134, f. 1218-9. Ency. pl. 468, f. 6.

THIS is a genus of fresh water shells, particularly abundant in Africa, Asia, and America; we have also heard it has lately been detected in Europe.

We should not have figured this common and well known shell, but for the purpose of comparing it with the next. When in a young state, the spines are very acute: more advanced they become less so; and in old individuals they are often very obtuse.

MELANIA setosa.

Shell ovate-conical, brownish olive; whorls armed with porrect tubular spines, enclosing setaceous bristles.

Melania setosa. Sw. in Brand's Journal, No. 33, p. 13.

This is a most singular species. From the tubular spines emerge two or three hornlike, elastic bristles, which appear embedded in the substance of the shell. A very ample account of the first specimen we ever met with, will be found in Brand's Journal for April, 1824. It was discovered in the Isle of France, by Mr. Warwick, where it appears to be very rare. Other specimens have since been brought to this country.

We were unwillingly drawn into a controversy respecting this shell some years ago. Our sentiments, in every thing that regards the shell itself, are unchanged. Not so with respect to the individual. The civilities and attentions we have since received from Mr. Gray, leave us to regret, very sincerely, that such a discussion should have ever taken place.

Melania. Pl. 1.





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MITRA. Pl. 3.

1, *adusta*. 2, *ambigua*. 3, *pusolata*.

MITRA fulva.

SPECIFIC CHARACTER.

Shell ovate-acute, smooth, fulvous, unspotted, marked with transverse sulcated striae, containing punctured dots: body whorl contracted; suture crenated: base obtuse: outer lip thickly and strongly crenated; the crenations, and the plaits on the pillar, white.

THE different nomenclature of Lamark and Dillwyn, induced us to suspect that our present species might still be retained under the name of *adusta*; but as a greater degree of confusion may perhaps arise in so doing, than that which we wished to avoid, we have now given it a distinct name, and defined its true characters. It is sometimes partially dotted with pure white. The *M. adusta* of Lamark is, in short, the same as the *ruffina* of Linnæus: or at least that species which Dr. Solander and Mr. Dillwyn conceive to be such. Our shell is from the Isle of France, and is not common: the crenated teeth on the lip are very strong; the base obtuse, and effuse: the spire and aperture of equal length.

MITRA ambigua.

Shell ovate-fuciform, rufous, with a white band near the suture, transversely striated and punctured, suture and outer lip crenated, base contracted; spire shorter than the aperture.

Less distinctly striated and punctured than the last; but differs considerably in being almost a fuciform shell: the base of the aperture is consequently contracted. We possess but one specimen, and know not its locality.

MITRA punctata.

Shell ovate, brown, striated and punctured: spire very small, somewhat conic: outer lip crenated: pillar sin-plaited.

A beautifully perfect shell of this new and very rare species, we procured from our friend Mrs. Mawe; we have never seen another: the inside of the lip is margined with deep brown.

Mitra. Pl. 3.





35.

PSARIS Jardinii.

Jardine's Saris.

Family Todidæ.—*Nob.* Sub-family Psariana.—*Nob.*

GENERIC CHARACTER.

Bill thick, strong, more or less depressed, culmen not elevated, both mandibles notched, the upper convex: *nostrils* round, nearly naked: *rictus* smooth; *mouth* very wide. *Wings* long, pointed, the second and third quill longest. *Tail* short, even.

SPECIFIC CHARACTER.

Cinereous white; *head, tail, and outer half of the wings, black:* *first and fifth quill equal: spurious quill none; orbits plumed.*

In Mus. Nost.

IN a small collection of birds, from the interior of the vast Empire of Brazil, we met with this new and highly interesting species. Its resemblance to the well known *Psaris Cayanus* is so close, that even Ornithologists would not at first suspect the difference; and this may possibly account for its having been overlooked. The size and colour of the two birds, in fact, are perfectly alike: but in this, the bill is much more depressed; the orbits, instead of being naked, are covered with feathers: and the spurious intermediate quill is entirely wanting. Our bird thus presents not only the characters of a species, but a modification of form, leading to the genus *Pachyrhynchus* of Spix.

Our friend Sir William Jardine, Bart., who has long felt, with us, a peculiar interest in this group, will accept our dedication of this species to him, as a proof of the estimation in which we hold his studies.

The publication of *Psaris Cuvierii* in the early series of our work, was the first addition made to this group after its publication in the *Regnè Animal*. The generic name of *Psaris* soon after became familiar to British Ornithologists, by being universally adopted. Recently, however, the Editor of the Zoological Journal has expressed his

opinion that this name, on the score of priority, should give place to another. The question would be of little moment did it merely concern this group; but involving, as it does, the entire nomenclature of two systems, it becomes a matter of some importance to ascertain their respective claims. The period of typographic publication, as connected with the only process by which knowledge can be universally communicated, is the only criterion, in our opinion, by which such claims should be decided. Dates, if *truly affixed*, speak for themselves. But to attain this advantage, no surreptitious or disreputable practices can be allowed. A plausible claim may indeed be made by any author, who hastily puts together an essay or pamphlet, for the sole purpose of anticipating the patient labours of another: but such artifices, when discovered, are sure to be discountenanced by honourable minds. To illustrate our meaning better, we will state a case.

Let us suppose, then, a learned Naturalist, in charge of a public museum, is engaged in a general classification of the animal kingdom: that to the type of each group, as progressively defined, he affixes a label, with the proposed name, and returns it again to the public rooms. Let us further suppose that an Ornithologist, wishing to make a new system, but without any materials for so doing, goes to this museum, selects, as they are successively named, these identical types for his examination, well knowing by whom, and for what purpose they are so named. He then goes home, and publishes, with all expedition, an ill-digested pamphlet, *wherein every group appears under a name, totally different from that by which he became acquainted with it.*

It is not for us to make the application. But that such practices have been resorted to, is well known among the highest scientific authorities in Paris. It is not so much in justice to a distinguished individual, as our respect for the broad principles of truth and honour, that we have said thus much. These are grave charges, but they are not lightly brought forward. Resting, as they do, on testimony the most unquestionable, we should deem it almost insulting to our countrymen could we suppose they will henceforward, by adopting these names, countenance a claim built on such a fraudulent basis.

Our views of the natural situation of this group, must be reserved for the next number.



Golden back'd Tanager male
T. Flava.

A G L A Ï A flava.

Yellow Tanager.

SPECIFIC CHARACTER.

Above glossy fulvous yellow; sides of the head, and middle of the throat, breast, and body, deep black; wings and tail green.

Tanagra flava. Lath. In. Orn. 1, 431.

Tanagra Braziliensis flava. Briss. Orn. 3, 39, 22.

Le guira-perea. Buff. Son. 12, p. 362.

Yellow Tanager. Lath. Syn. 3, 244. Gen. Hist. 4, 22.

Tanagra chloroptera. Vieil. Orn. 2.

THE buff-coloured yellow which spreads over the upper plumage of this bird, in some lights becomes much richer, and delicately gilded. The wings appear to be sea-green, but this colour only margins the borders of the feathers, the inner parts of which are blackish: the tail is coloured in the same way, the feathers divaricating from the middle, which is slightly forked. The black in front terminates at the vent; which, with the sides of the body, are waxen yellow.

In the Ornithology of M. Vieillot, we find no mention of this well known bird by its long established name: but the *T. chloroptera* of this writer, described as a new species, is evidently no other than the *flava* of anterior authors.

Our figure is of the natural size. The female is dark bluish green above, and buff beneath, much paler on the throat and breast: the chin and sides of the head blackish; and the crown buff-coloured yellow.

We found this species not uncommon in several parts of Brazil, particularly round Pernambuco; frequenting the gardens, and feeding on the smaller-sized fruits.



R H E T U S Cramerii.

GENERIC CHARACTER.

Larva and Pupa unknown.

Wings triangular; the posterior lengthened and rather acutely tailed. *Antennæ* with the club linear-fuciform. *Palpi* cylindrical, elongate, perrect, incurved, remote, naked; the second joint remarkably long. *Anterior feet* in the male short and very hairy; in the female longer, naked, and furnished with minute claws. *Wings*, when at rest, horizontal.

Types.—Pap. Rhetus. Periander.—(*Cramer.*)

SPECIFIC CHARACTER.

Wings black, with two white subhyaline bands, both sides alike; posterior wings elongated, vivid blue, acutely tailed, with a transverse sub-lunular band at the anal angle.

Papilio Rhetus. *Cramer. pl. 63, f. c.*

THIS is one of the rarest and most splendid lepidopterous insects of Brazil. We were once fortunate in capturing six specimens, fluttering over a shrub in the early morning sun, during our encampment in the Forest of Urupeè, in the Province of Bahia: but we never again met with this charming creature.

The perfect insect has been figured in the costly, but truly valuable, work of Cramer; yet as neither the larva or pupa are known, we cannot determine on its natural group. Its relations, as suggested by the perfect insect, appear to be these. We consider the analogy between the groups respectively containing *P. Podalirius*, and *Marius* (Cr.), to be immediate and direct: the form of the last type, and much of its general structure, is seen in our insect; but the details will not admit of a further similitude. Among the *Ericinæ* we again detect this form in *P. Corineus* and *Dorylus* (Cr.), and continuing the comparison, we see the *antennæ, palpi*, and feet (in one sex) of *Rhetus*, accurately represented in those of *P. imperialis* (Cr.), among the *Thecladæ*. We therefore suspect, that the real affinities of our insect lie between the two last groups: It seems moreover to have a strong analogy with *Leilus*. The upper figure is of the male, the under of the female.

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PAPILIO. *Niamus*

PAPILIO Niamus.

Order Lepidoptera. G. Papilio. (*Auct.*)

GENERIC CHARACTER.

Wings pale, with longitudinal bands: posterior lengthened, canted; the tails long and acute.

SPECIFIC CHARACTER.

Wings yellowish white with black bands; posterior wings acutely tailed, with a black line and whitish lunule at the anal angle, and marked beneath with a macular red band margined with black.

Pap. Niamus. *Alis flavo-albidis, fasciis nigris; posticis caudatis, apice nigro lunulis albidis: his subtus strigâ maculari rubrâ.*
Latrielle et Godart. Ency. Meth. 9, p. 51.

To describe in detail those colours and markings of an insect, which the eye can embrace at a single glance on a well executed representation, is surely unnecessary. We shall therefore merely observe that this species has hitherto remained unfigured: that it is a native of Southern Brazil, and of such rarity, that in two years, we never met with more than one specimen.

In some observations upon what appear to us the leading groups of the *Diurnal Lepidoptera*, published some time ago, we considered those groups wherein the anterior feet are perfectly developed, and the chrysalis braced by a transverse thread, as the most perfect and typical. Subsequent observations confirm us in this general view; but it still remains to be investigated, to which group the generic name of *Papilio* should be retained. The wide dispersion of that form represented in the two European species *Podalirius* and *Machaon*, and which form occurs in all the temperate and tropical regions of the globe, leads us to suspect it as the most typical group: to this, *Papilio Niamus*, from its very close affinity to *Podalirius*, unquestionably belongs.





ROSTELLARIA. P. I

R. cuneata

ROSTELLARIA curvirostris.

Short-beaked Spindle.

Class Mollusca. Order Zoophaga.—(*Gasteropoda*, Cuv. Pars.)

Carnivorous Mollusca without jaws; the mouth formed into a retractile trunk: conveying nutriment by suction. Respiration aquatic: the water being conducted to the branchiæ by a projecting siphon.

Family, ? Strombidæ. (*Les Ailées*. Lam.)

SYNOPSIS OF THE GENERA.

Div. 1. *Outer lip with a sinus; distinct from the basal canal.*

STROMBUS. L. Outer lip dilated, entire, basal canal short.

Stromb. gigas, auris-Diana, tridentatus, urceus, &c.

PTEROCERAS. Lam. Outer lip digitated; canal lengthened, arcuated.

Div. 2. *Sinus simple; formed by the prolongation of the canal.*

APORRHAIIS. Dacosta. Outer lip dilated and digitated.

Strombus pes-pelecani. Auct.

ROSTELLARIA. Lam. Outer lip dentated, but not dilated. Basal canal long.

HIPPOCHRENES. Montf. Outer lip generally dilated, and always entire. Basal canal moderate or short. Spiral canal nearly equal to the spire.

Rost: macroptera, columbata, fissurella, Lam.

SPECIFIC CHARACTER.

Basal canal short: spiral canal thickened, and perpendicularly ascending on the spire.

Strombus fusus. Linn. Gm. 3506. Lister, 854, 12. Seba, 3, 66, 1.

Rostellaria curvirostris. Lam. Sys. 7, 1, 192. Ency. Meth. pl. 411, f. 1.

THIS elegantly formed shell is a native of the Red and Indian Seas. It is the most common of the few species retained in the genus *Rostellaria*; all these are recent; while *Hippochrenes* has occurred only in a fossil state.

The preceding table of affinities, connecting the leading forms among the *Strombii*, will be adverted to hereafter. At present we shall offer a few observations on the nature of that more comprehensive division of the class *Mollusca*, to which this particular group appears to belong.

Strombidæ. Pl. I.

The learned Author of the *Horsæ Entomologicæ*, in that part of his valuable essay relating to the *Molluscæ*, considers our knowledge of these animals too imperfect to enable him to state the nature of the typical groups: the situations of which, in his diagram of the animal kingdom, are therefore merely indicated by stars. M. Macleay further remarks, that the *Gasteropoda* of M. Cuvier, with certain restrictions, evidently form a circular group. Yet, from the above omission, it appears he still entertained some doubts on the propriety of this arrangement. Labouring under similar disadvantages to those which impeded the researches of so profound an observer, we feel some hesitation in expressing a different sentiment on the subject, particularly in reference to his own disposition of affinities.

It is evident that these typical groups, whatever may be their nature, must present some very strong points of analogy to those in the circle of *Vertebrata*: and that such analogies should extend to the corresponding groups of the *Annulosa*. This we should expect, not only as the necessary result of a truly natural arrangement, but as a primary test, by which the correctness of any series of affinities must be tried. Now admitting that Quadrupeds and Birds shew the same typical perfection among the *Vertebrata*, as the Mandibulate and Suctorial Insects unquestionably do in the *Annulosa*, we have two beautiful analogies between these otherwise dissimilar groups, taken from one of the most important functions of nature. Quadrupeds and mandibulate insects are provided with jaws for tearing and masticating their prey, while in birds and suctorial insects, the mouth is lengthened into a proboscis, by which nourishment is imbibed by suction. These analogies are equally conspicuous among the *Molluscæ*. The *Phytiphages* of Lamarck (of which the garden snail is a good example), are furnished with jaws and masticate their food: the *Zoophages* of the same accurate observer, have their mouth elongated into a retractile trunk or proboscis, by which they pierce through other shells, and suck the juices of the inhabitant. To insist on the importance of these distinctions, employed as they have been to characterize primary divisions, is surely unnecessary. That they will be subject to considerable modification, in the subordinate groups, may naturally be expected: but we refrain at present from offering an opinion on the nature of such groups, dependant, as they must be, on greater anatomical knowledge than we yet possess. Nevertheless, until more direct analogies are discovered, than those here stated, we feel some confidence in employing them as typical distinctions of the two great divisions of *Gastropod Mollusca*.



PETROICA multicolor.
Scarlet breasted Robin

PETROICA multicolor.

Scarlet-breasted Robin.

Family Sylviadæ.

GENERIC CHARACTER.

Bill slender, the sides compressed, the tip gradually bent, and beset with bristles at the base. *Wings* long; the first quill spurious; the second intermediate in length between the sixth and seventh. *Tarsi* elevated, the inner toe manifestly shorter than the external toe. *Tail* broad, even.

SPECIFIC CHARACTER.

Head, throat, and upper plumage black; front snowy; wings with one longitudinal and two oblique white bands; breast and part of the body scarlet; belly dull white.

Red-breasted Warbler. *Lewin. Birds of New Holl. pl. 17.*

Muscicapa multicolor. *Gen. Horef. & Vig. Linn. Tr. v. 16, p. 243.*

Red-bellied Flycatcher. *Lath. Gen. Hist. 6, p. 209, pl. 100?*


Mus. Nost. &c.

THE analagous resemblances between the species and groups of one region, and those by which they are represented in another, are among the most curious and remarkable facts in Natural History: whether we look to them as proofs of a Divine plan, vast in its extent, and wonderful in its details, or as exemplifying that system of symbolical relationship by which every part of the animated world is mutually connected. Both appear intended for one great purpose, the partial initiation of man into earthly mysteries, that he may have greater faith in those which regard his eternal welfare.

The Robin, spread over the whole of Europe, is represented in temperate America by the Blue Bird of Wilson (*Sialia Wilsonii*, Sw.). Neither of these are found in New Holland, but the bird before us may be considered their representative. Lewin, who wrote upon the spot, observes that although in some respects solitary, it fre-

quents the abodes of man in winter, like the Robin; which it further resembles in its note. Our European bird is intimately connected with the Stonechats (*Saxicolæ*).—The remark of another eye witness, proves the Australian species to have the same relation. Mr. Caley mentions that he saw "this bird in November" (*our European summer*), "when far distant in the mountains, in the roughest part of the country I had then or since visited." *Linn. Tr.* 15. p. 245. Mr. Caley, moreover, as if perfectly aware of its natural affinities, names it the Australian Redstart. So closely, in short, does this bird resemble our European Stonechat, that but for the recent acquisition of more typical species, we should have had doubts whether to characterize it as a distinct type.

Linnæan writers, as might be supposed, have always regarded this as a Flycatcher, but as Mess. Horsfield and Vigors have recently dwelt, at some length, on the propriety of such an arrangement, it may be as well to state the leading differences between the two families. In *Muscicapæ atricapilla*, (with which these gentlemen have compared our bird,) the bill (fig. 1, 2), like that of every genuine Flycatcher, is depressed from the base to the tip, while that of *Petroica* (fig. 5, 6), of the Stonechat (fig. 3, 4), and of all *Saxicolæ*, although depressed at the base, is invariably compressed on the sides. By these characters the former preserve their affinity to the Todies, and the latter to the Thrushes. In the garrature of the rictus there is also an essential difference. The bristles of the *Muscicapæ* (f. 1, 2), are always rigid and directed forwards: while those of the *Saxicolæ*, although sometimes remarkably long, are generally weak, and diverge in different directions. Thus much may be stated on the chief peculiarities of the groups in question: they may for the present be termed analogies, but there are considerations which induce us to suspect they are more intimately connected by affinity than is generally supposed. To facilitate comparison, our figure is of the natural size, and particular care has been taken in the correct delineation of all the proportions and details.





PLOCEUS *Taiti*
Haydeni nuchalis *Harter*

PLOCEUS textor.

Rufous-necked Weaver.

Family Fringillidæ?

GENERIC CHARACTER.

Bill lengthened-conic, slightly curved, entire, the base advancing high on the forehead, and dividing the frontal feathers, the culmen curved, the commissure sinuated. **Nostrils** oval, naked: without a membrane. **Wings** moderate, rounded, the first quill spurious, the five next nearly of equal length. **Feet** short, strong, the middle toe longer than the tarsus, the hind toe nearly equal with the tarsus. **Tail** very short, rounded.

DIVISIONS OR SUB-GENERA.

MALIMBUS. *Vieil.* Bill more straight, slender, and lengthened.

PLOCEUS. *Cuv.* As above.

EUPLECTES. *Nob.* Bill of Ploceus. Toes and claws very slender. The greater quills scarcely longer than the lesser; spurious quill very minute. *Type, Loxia Orix. L.*

SPECIFIC CHARACTER.

Orange yellow, varied above with black: head, chin, and front of the throat black: nape with a chestnut band.

Oriolus textor. *Auct.*

Ploceus textor. *Cucier. Reg. Anim.*

Le cap-more. *Buff. Son. 19, p. 165. Pl. Enl. 375 (very bad).*


THE Weaving Birds, confined to the hotter regions of the old world, are chiefly found in Africa, where they represent the Hangnests (*Icterinæ*) of America: an analogy long since remarked by Buffon. Both these tribes astonish us by the consummate skill with which they fabricate their nests: but the intelligence displayed by the African Weavers is still more wonderful. The curious reader will see a most interesting account of these birds in Paterson's African Travels, or in Wood's Zoography.

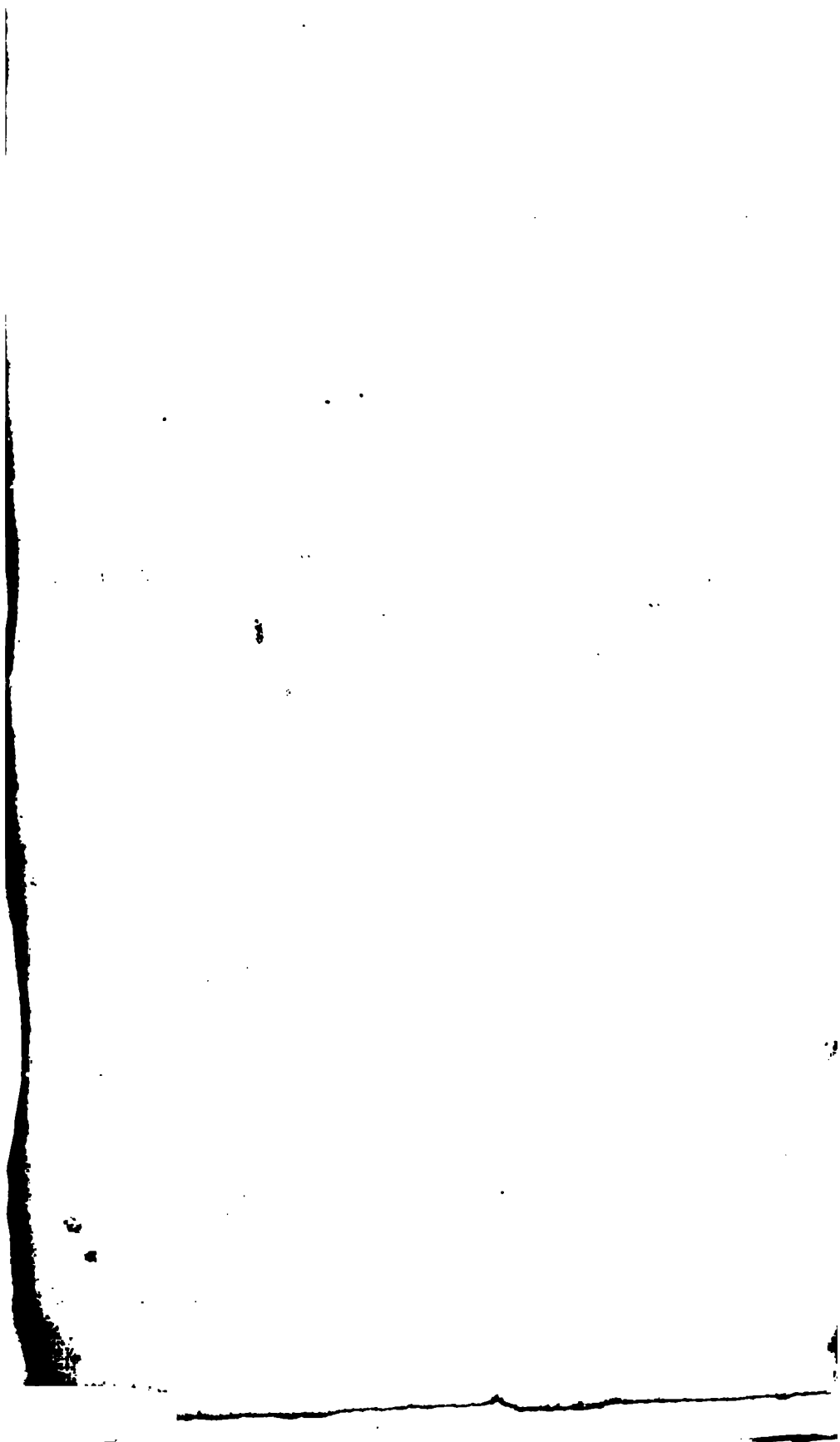
Of the present species, although very common in Senegal, nothing appears known beyond the simple fact of its weaving, in confinement, between the wires of its cage.

Its total length is about six inches, the minor proportions may be correctly ascertained by the scale on the plate.

If the genus *Ploceus* of Baron Cuvier be restricted to the old world, it becomes one of the most natural groups in Ornithology. Yet, like all others of an extensive nature, it exhibits several modifications of structure, which the present state of science renders it necessary to define. Whether such definitions are to be termed generic, sub-generic, or sectional, must, in the first instance, depend on mere opinion. It is enough if these lesser groups are defined. To ascertain their relative value is the next step: this is the second, and by far the most difficult process, in the study of real affinities; for not only that particular group which claims our attention, but every other related to it in a higher division, must be patiently analyzed. Hence it frequently results that groups assume a very different *apparent* station to what they did in the first instance. Are we therefore to refrain from characterizing or naming them, because their relative value cannot, in the first instance, be ascertained? We think not. That *genera* have been unnecessarily multiplied, no one can doubt, who has looked beyond such circumscribed limits. And if forms of transition, (generally comprising one or two species alone,) are to be so ranked, we must immediately treble or quadruple the present number of ornithological genera. The truth is, that many groups, which in our first process of combination, we are obliged to distinguish, or perhaps name, will, in the second, be united to others. So that it appears highly probable that the number of genera, in ornithology, ultimately retained, will be fewer perhaps than at present. We are, in short, but in the infancy of this knowledge, and our genera, for the most part, must be looked upon as temporary landmarks, to denote the ground gone over, and to be fixed or removed as our views become more extended, by a wider analysis of qualities and relations.

Total length $6\frac{1}{2}$ inches, bill $\frac{1}{10}$, wings $3\frac{6}{10}$, tarsi $\frac{2}{10}$, middle claw 1, tail $2\frac{1}{2}$, beyond the wings $1\frac{1}{4}$.







AMPULLARIA PL II

1 *Subcarinata* 2, *lineata*.

AMPULLARIA subcarinata.

SPECIFIC CHARACTER.

Shell reverse, thickish; whorls depressed near the suture, and marked by a parallel line; spire short, obtuse; umbilicus large, open, slightly carinated, and marked with an internal groove.

Ampullaria subcarinata. Sow. *Genera of Shells*, f. 4.

THE politeness of Mr. G. Sowerby has given us the opportunity of examining this rare and little known species, first described and accurately figured by himself. It was discovered, we believe, by Mr. Cranch, the ill-fated naturalist who accompanied the unfortunate expedition to the Congo, in that river. No specimens, we are informed, have subsequently reached this country. The surface is rough, occasioned by irregular corrugated wrinkles: the epidermis olive.

AMPULLARIA Nilotica.

Shell reverse, thin, smooth, whitish, with an olive epidermis finely striated longitudinally; lower half of the basal whorl much contracted: spire prominent, obtuse; operculum horny; umbilicus large, open, the margin obtusely carinated.

The shell from which our figure was taken we received from Mr. G. Sowerby, under the name of *Nilotica*, some years ago. Whether it is the same, or specifically distinct from Lamarck's *Guinaica*, we have no means of judging, otherwise than from the figures he cites of Chemnitz. If these are accurate, there are many points of difference; but no doubt the Editor of the *Bulletin des Sciences*, will have great pleasure in setting us right upon this subject.

On attentively comparing the descriptions, given by Lamarck, of eleven species of *Ampullaria*, with those we
Ampullaria. Pl. 2.

have characterized in different works, we can only discover two instances wherein the same species have been mentioned by both parties, under different names. Our *A. conica*, is probably Lamarck's *virens*, and belongs to the genus *Pachystoma*, Guild. The other instance is curious: in the Appendix to the Bligh Collection, we described a remarkable variety of *A. fasciata*, under the sub-specific name of *Canaliculata*. In the following month appeared the second part of Lamarck's *Système*, wherein this variety appeared as a *species*, under the very same name. It would almost appear as if the two accounts had been written at the same moment. We have since had good reason to be confirmed in our suspicion as to this shell being a mere variety of *fasciata*, from a fine series of specimens sent us from Demerara. We take this opportunity, however, of expressing a belief that our *A. leucostoma*, is the young shell of *rugosa*.



STOMBUS PILI

S. peruvianus

STROMBUS Peruvianus.

Order Zoophaga. Family ? Strombidæ.

Genus Strombus.—*Lam. Sys.* 7. 199.

SPECIFIC CHARACTER.

Shell ponderous, nodulous, spire very small, depressed; outer lip above produced and attenuated, margin reflected; aperture striated.

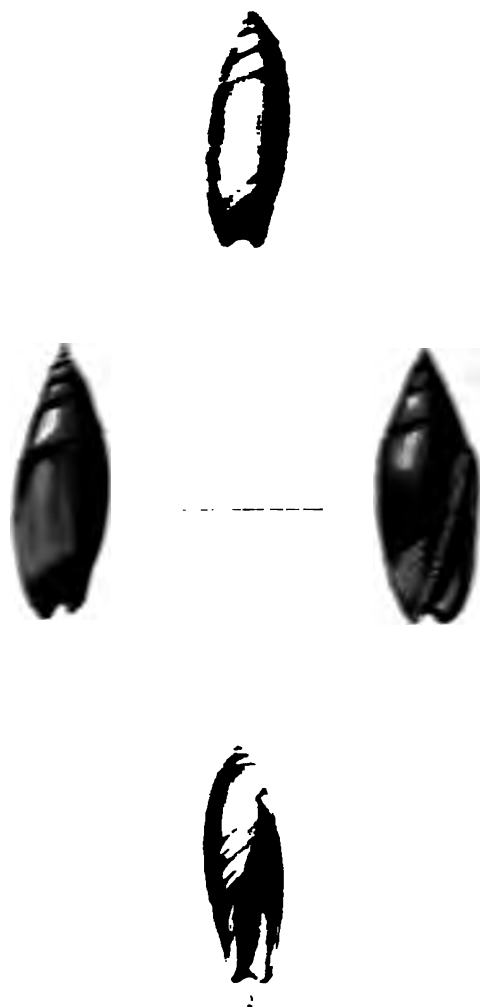
Strombus Peruvianus. Sw. in *Phil. Mag.* 62, p. 377.

WE first recorded this singular-shaped Strombus from a specimen sent from the Coasts of Peru. Others, from the opposite side of the American Isthmus, collected near Panama, have more recently come into the possession of our friend, the Rev. J. Bulwer, F.L.S. Its general form is not unlike *S. gallus*, but the spire is unusually depressed, and the aperture deeply striated: the upper surface is marked by parallel grooves, and one of the nodules is particularly large.

In our last number we defined what appear to be the leading forms among the *Strombii*, from such characters as are exhibited by their shells. This mode of classification, we admit, is always attended with hazard; and should not be ventured upon without due precaution. To attempt a *natural* arrangement of the higher groups, on such considerations alone, would be manifestly absurd. On the other hand, we think both principles may be carried too far: and that a system founded exclusively upon the animal would, in our present state of knowledge, be little less artificial than another taken merely from the shell. We see, on every side, throughout Nature, the most beautiful and perfect adaptation of structure to use. The typical *Mollusca*, whether among the *Acephala* or *Gasteropoda*, appear to be testaceous; and to exhibit a corresponding perfection in the structure of their coverings: one form passes into another by as gradual modifications of the shell, as could possibly be looked for in the nature of the animal. We have attempted to exemplify this among the *Unionidæ* and the *Olivæ*. We shall now examine the *Strombii* with reference to the same object.

“*Les Ailéés*,” observes Lamarck, “*constituent une fa-*
Strombus. Pl. I.

mille très-naturelle, qui avoisine celle des Canalifères par ses rapports, mais qui en est éminemment distincte." This able classifier (whose perception of affinities is truly admirable), then proceeds to divide these shells into three groups, founded upon such excellent distinctions, that we need not here dilate on their importance. Two of these genera are characterized by a deep and well defined sinus or notch, towards the base of the outer lip; quite distinct from the basal canal, and intended either for the passage of the animal's proboscis, or its respiratory siphon. In *Strombus* the outer lip is dilated, but entire; in *Pteroceras*, it is equally enlarged, but divided into long processes. Such are the typical distinctions, and their immediate union appears effected by the *Strombus laciniatus* of Chemnitz. The third genus of Lamarck's is *Rostellaria*, in which he places all those species wherein the sinus above mentioned is united to the basal canal. Now if the *Strombus pelecani* of authors had this canal more closed, and the sinus distinct, it would be a *Pteroceras*. Da Costa long ago placed this shell as the type of a genus, and the observations of Mr. Dillwyn, in his short but highly valuable paper on fossil shells (Phil. Trans. for 1823, p. 1, p. 393), have shewed the importance which we should attach to its structure: it is, in fact, a *Pteroceras*, but with the above mentioned sinus removed to the base of the digitated lip, and confounded, as it were, with the basal canal. Excepting to a *Pteroceras*, it cannot be compared with any known shell, unless it be to the *Strombus fissus* of Linn. The hiatus between them certainly appears great, yet the affinity is not interrupted by any thing known: this latter shell resembles the true *Rostellariæ*, but with the digitated processes of *Pteroceras* reduced to teeth; which teeth, in *R. curvirostris*, become confined to the basal part of the unexpanded lip. We are here met by certain fossil shells, preserving the form of *Rostellaria*, but with the outer lip entire, and sometimes considerably expanded: in these the spiral canal sometimes extends to the summit of the shell: finally the distinct sinus again appears in such species as *S. cancellatus*, *canalus*, &c., all which have been classed by conchologists with *Strombus*. This series is sufficient to shew the *tendency* of a circular disposition of relations, but very many of the intermediate forms are wanting, nor is it at all clear in what way the immediate passage is effected between *Hippochrenes* and the genuine *Strombii*.



OLIVA PIÙ
1 chiusella 2 strata

OLIVA volutella.

Class Mollusca. Order Zoophaga. Lam.

Genus Oliva. Lam. Sys. 7, p. 416.

SPECIFIC CHARACTER.

Shell ovate-conic, mitriform; chestnut, the body whorl bluish; spire lengthened, acute; pillar with 6-7, slender, regular plaits.

Oliva volutella. *O. testâ ovato-conicâ, subcæruleâ, ad spiram basimque luteo fuscâ; spirâ valdè productâ, acutâ.* Lam. Sys. 7, 1, p. 432.

WE are indebted to the Rev. Mr. Bulwar for our specimens of this elegant and highly interesting species, received by him from the American Isthmus. It varies much in the intensity of its colour, as may be seen from the above description, given by Lamarck, of examples procured by Baron Humbolt on the shores of Mexico.

There are reasons for believing the genus *Voluta*, as defined by Lamarck, to be typical of a natural group, comprising the genera *Mitra*, *Oliva*, *Ancillaria* and *Marginella*. The obvious affinity between *Voluta* and *Mitra* need not be dwelt upon. The connexion of *Mitra* with *Oliva*, we noticed in describing *Mitra olivæformis*, at pl. 48 of our first series. This affinity appears further strengthened by a shell in the late Tankerville Collection, especially recorded by Mr. G. Sowerby, as "remarkable for its resemblance to an Olive." We regret not having seen this shell, but such an authority is fully sufficient. The group of Mitres, by which this transision appears effected, is that mentioned under the head of *M. bicolor* (*Mitra*, Pl. 1.) of this series. This little group has three relations: one to the smooth Mitres (as *M. pertusa*), another to *Cono-helix*, and a third to the *Olives*: the species are all remarkable for the polished smoothness of their surface, for the total absence of the inner lip, and for the lower plaits of the pillar extending much beyond the aperture: these plaits, moreover, are generally five or six, and all very slender. The conchologist will perceive that nearly the only character wanting, to render this description applicable to an Olive, is the channelled groove round the suture. This character is added to the shell before us, which thus presents the first type of form in the present genus. Proceeding to the more perfect Olives, we observe the spire becoming gradually shorter; the vitrious deposition on the inner lip increased in thickness; the upper plaits on the

Oliva. Pl. 1.

ristatus.

Backed Saris.

Nobis.

d. *Tarsi* moderate, weak,
s united. *Wings* and *tail*

Nobis.

very wide. *Bill* thick, de-
ck, tarsi rather short, toes
manifestly longer than the
anterior scales transverse;
the male generally with a
second.

lengthened, the first quill
ort, even.

c.—Cuv.

ed, bill shorter, wings more

Nob.

ER.

use of the wings with a
ill broad, crown black,

n. 354.

at of two specimens,
om the mining pro-
ese interesting birds
aturalists who have
fatigable Azara pro-
states some valuable
al to the *Cayenne*
le Noir, which, in
it is elevated, rapid,
hos, ni remuans, et

pillar numerous, and those at the base thicker and more external (*M. fulmineus*, Lam. *elegans*, En. Meth: 362, 3.), the ventricose shape of some (*O. undata*, *inflata*, Lam.), the spire often concealed by a vitreous covering, and even the colours of others (*M. tessellata*, *guttata*) remind us of the typical Volutes. It is very remarkable, that in most of the cylindrical Olives, the apex is more or less, papillary: the last complete terminal volution of the spire being thick, inflated, and distorted: (see particularly *O. reticularis*, En. Meth. 36, f. 1; *fusiformis*, Ib. 367, 1; *guttata*, Ib. 368, f. 2.) Others are seen of a more slender form, as *O. subulata*, *L. acuminata*, E. M. 368, 3, where the pillar is similarly plaited. But in several small species allied to *O. conoidalis*, another modification of form has evidently commenced: the spire is regularly acute; the upper plaits disappear; and those which remain, are only at the thickened base of the pillar: the aperture, no longer narrow, becomes wide at the base, where the pillar takes an oblique direction inward: we are thus led to the form of *O. hiatula*, E. M. pl. 368, f. 5, where the characters of *Ancillaria* become apparent in the effuseness of the mouth, the double belt at the base, and the imperfect groove on the outer side of the pillar. Whether we look to this shell, or to the descriptions given by Lamarck of the fossil species *plicaria*, *canalifera*, and *laumontiana*, or finally, to the *Ancillaria glandiformis*, Sow. no doubt can remain of the genus *Oliva* being here blended with the *Ancillariæ*. There is, however, another form among the *Olivæ*, which deserves mention, as it cannot well be associated with either of the preceding: this we have described below. Another genus that may be thought connected with *Oliva*, is *Terebellum*: a group very ably illustrated by Mr. G. Sowerby, in his "Genera of Shells." To that work we must refer the reader for those reasons which shew its more immediate relation to *Ovula*. It is, in short, one of those forms too hazardous to class without a complete knowledge of the animal.

O L I V A striata.

Shell small, cylindrical, sub-effuse, distinctly marked by regular longitudinal striæ; upper part of the body whorl with one, lower part with four, belts; spire short, channelled, sub-papillary, naked; base of the pillar striated and externally detached by a groove.

Ancillaria canalifera?? Lam. Syst. 7, 415.

We do not find this fossil clearly described. Our specimens appear to be from the London clay. Its form seems analogous to *Conohelix* among the Mitres. The line adjoining the figures denotes the natural length of the shells.



PSARIS cristatus
Crested or white backed Saps.

PSARIS cristatus.

Crested, or White-backed Saris.

Family Todidæ.—*Nobis.*

Bill lengthened, depressed, boat-shaped. *Tarsi* moderate, weak, the three anterior toes more or less united. *Wings* and *tail* short.

Sub-family Psariana.—*Nobis.*

Head very large, depressed. *Mouth* very wide. *Bill* thick, depressed, convex above. *Feet* weak, tarsi rather short, toes united at their base, the outer manifestly longer than the inner; claws broad, compressed; anterior scales transverse; lateral scales small, numerous. The male generally with a spurious quill between the first and second.

GENERA.

PSARIS. *Cuv.* Rictus smooth, wings lengthened, the first quill much longer than the fourth, tail short, even.

Type, *Psaris Cayanus*.—*Cuv.*

PACHYRHYNCHUS. *Spix.* Rictus bearded, bill shorter, wings more rounded, tail lengthened, graduated.

Type, *Psaris niger*.—*Nob.*

SPECIFIC CHARACTER.

Blackish brown, beneath pale fulvous, base of the wings with a concealed snowy spot, spurious quill broad, crown black, slightly crested.

Psaris cristatus. *Sw. in Zool. Journ. 2, p. 354.*

Mus. Paris. Nost.

Of this very rare species we know but of two specimens, both of which appear to have come from the mining provinces of Brazil. The economy of these interesting birds has not yet been detected, even by naturalists who have lived in their native regions. The indefatigable Azara professes his ignorance on this point, but states some valuable information on a species (nearly allied to the *Cayenne Saris*) named by him *Le Distingué a tête Noir*, which, in Paraguay, is a bird of passage: its flight is elevated, rapid, and prolonged. "*Ils ne sont ni farouches, ni remuans, et*

ils se tiennent long temps à la même place. Ils ne sortent point des grands bois, et ils se perchent toujours au plus haut des arbres les plus élevés, où ils ne cherchent pas à se cacher." Azara Voy. 3, p. 407.

The size and strength of the bill induced us, some years ago, to adopt the popular classification of this genus with the family of Shrikes; but a more particular analysis of that and the neighbouring families, lead us to suspect that its natural situation is far different: our reasons for this belief will be stated at large in another work. For the present it may be remarked, that the smoothness of the rictus, as indicating a frugivorous habit, forbids us to place it with the Flycatchers; while the feet, perfectly different from those of the true Shrikes (*Lanius*, Sw.), can only be compared with those of the *Piauhau* (Buff.). The affinity which this group bears to *Gubernetes*, is merely superficial: but its analogies to *Ceblepyris*, among the *Laniadæ*, and to *Pachycephala*, among the *Ampelidæ*, are probably direct.

The merit of having first directed the attention of Ornithologists to the singular spurious quill, which generally distinguishes the males of this group, we transfer from ourselves to Azara. His invaluable work we did not then possess, and knew not that the circumstance had already been mentioned by him.

We are only acquainted with the genus *Pachyrhynchus* of Spix, by seeing this name affixed to our *Psaris Cuvierii* in the Paris Museum. The distinction is judicious; particularly as the two groups point to different relations. Of *Psaris*, as now restricted, we know of six species, and of *Pachyrhynchus*, ten.

Our present bird is osculent between these forms: we place it with *Psaris* on account of its wings and tail; but it accords with *Pachyrhynchus* in the rictus being slightly bristled. The spurious quill is half the length of the first, which latter is as long as the fourth. The tail is in a slight degree rounded. It is, perhaps, needless to remark, that all these birds are confined to Equinoctial America.



CHÆTURA macroptera.

Long-winged Swift.

Family Hirundinidæ.

GENERIC CHARACTER.

Bill entire, the sides much compressed, the culmen arched. The lower mandible recurved at the tip. *Wings* very long. *Tail* scansorial, the extremity of the shafts naked, and acute. *Tarsi* naked, the three anterior toes and claws nearly equal; hind toe not versatile. *Nob.*

Type. *Chætura pelasgia*. Stevens.

SPECIFIC CHARACTER.

Brown: wings and tail glossed with greenish blue; back grey-white: chin and under tail covers snowy; tail even.

Ob. Tail $3\frac{1}{2}$ in. longer than the wings, the two first quills longest and equal.

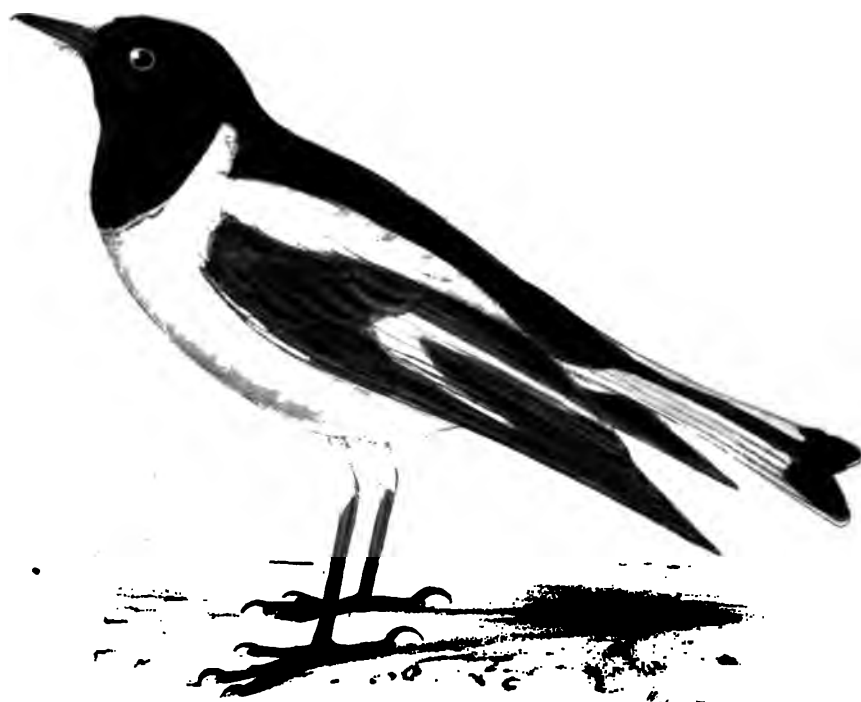
For an inspection of this new and imposing species, we have to thank Mr. Ward, an Animal preserver of considerable talent. We do not find it mentioned in any Ornithological work we possess, and our library is not small: but with so many publications continually issuing from the continental press, we shall feel no surprise at discovering it has already been published.

This and the *Hirundo albicollis*, (first named by M. Vieillot) are two of the largest species yet discovered, of a very singular group of Swifts; wherein the tail feathers are spined, and even more rigid than those of the Woodpeckers: by this structure the birds can remain for a considerable time in the most perpendicular situations. The expanded tail thus acts as a powerful support, which is further increased by the size and strength of the claws, much larger than those of ordinary Swallows. There are several species, most of which are natives of America.

The direct analogy which this group bears to the typical scansorial Birds, joined to the general superiority of flight which the Swift possesses over the Swallow, leads us to suspect this may prove to be the typical group of the *Fissirostres*; an order in which Nature, in her wish to develop the greatest powers of flight, appears to neglect all those laws which she afterwards so rigidly adheres to: We intend in another work, to enter on this interesting subject more fully.

Our figure is in strict conformity with the scale on the plate, which is that of an inch.

1



PETROICA bewickii
Black & white Robin

P E T R O I C A bicolor.

Black and White Robin.

Family Sylviadæ. Sub-family Saxicolinæ.

(See Northern Zoology; Vol. 2.)

GENERIC CHARACTER. See No. 8, pl. 36.

SPECIFIC CHARACTER.

Black and white. Head, throat, back, and tips of the tail glossy raven black: breast, scapular covers, stripe on the wings, and plumage beneath, white: tail slightly forked.

IN giving publicity to this new and interesting bird, we feel particular pleasure in expressing our thanks to Allen Cunningham, Esq., His Majesty's Botanist, in New South Wales, by whom it was there discovered. Although devoted to a science already so much benefited by his researches, this enthusiastic Traveller found some leisure for Ornithology, and has lately favoured us with a large collection of skins, prepared during one of his inland journeys; with a request that they may be made public: among other highly curious forms, the present bird is conspicuous. It was found in the open forest country, North of Liverpool Plains.

When once we are so fortunate as to discover the natural station of any being, we may be convinced that every circumstance regarding its structure, habits, or even colour, are employed by Nature to typify its relations to other beings; and that until most of these can be explained, there is good reason to suspect the accuracy of our views on its true affinities. Possessing all the essential characteristics of *Petroica*, our bird exhibits in the bill, feet, and tail, an immediate affinity to *Sialia arctica*: while it is clothed in the pure white, and glossy black plumage, which nature afterwards employs to designate the typical group of *Grvllivora*, (North. Zool.) at the opposite point of the circle of *Saxicolinæ*. This remarkable analogy is extended to the bill, the point of which is longer and more incurved, than in any of the immediate affinities of our bird: its close relation to the old world *Saxicolæ*, is too obvious to need explanation.



1



2



2



1

MARGINELLA PII

1. *oblonga*. 2. *guttata*

MARGINELLA oblonga.

Family Volutidæ. Genus Marginella. Lam. Sys. 7. p 354.

SUB-GENUS VOLUTELLA. Nob.

Shell oval-ventricose: Spire concealed: outer lip generally smooth; base of the pillar with four to five oblique plaits: aperture smooth within.

Type, *Marginella bullata*. Lam.

SPECIFIC CHARACTER.

Shell oblong, rather gibbous round the middle, fawn coloured, with two obsolete bands: spire concealed: outer lip and summit marked by orange spots: pillar 4 plaited.

A species not hitherto described; its shape is unusually oblong, and the spire is quite concealed: We are unacquainted with its locality. The perpendicular line expresses the natural size.

In *Voluta* and *Mitra*, the two typical groups of this family, the variations of form are so striking, and the species so numerous, that we readily assent to the plan, proposed by others, of further dividing them into genera: but in the aberrant group, containing *Oliva*, *Ancillaria*, and *Marginella*, the forms are less diversified, and the species fewer; the minor divisions may therefore, for the present, be termed sub-genera. The approximation of *Marginella* to *Voluta* has frequently been stated. In *M. bullata* we have a miniature melon *Volute*, while *M. faba* is a no less obvious representation of *V. magnifica*. Hence these forms appear typical. Yet *M. persicula* and *lineata* cannot well be placed with either, as their characters seem to indicate a direct analogy to *Conohelix* among the Mitres. As to *Volvaria*, we concur with other writers, in thinking that the French Conchologists have erroneously blended that genus with *Marginella*.

MARGINELLA guttata.

Oval, spire concealed, covered with transverse oval spots margined with white, somewhat ocellate, and disposed longitudinally; pillar 4 plaited.

We could give no correct idea of this very pretty shell, without enlarging the figures; the natural size is indicated by the horizontal line. Our specimen is the only one we have yet seen, nor do we know its habitat.

Marginella Pl. 1.





MARIUS *Cinna*.

MARIUS Cinna.

Family Nymphalidæ. (Stirps. 3? Horsf.)

GENERIC CHARACTER.

Larva and pupa *unknown*.

Perfect insect. *Wings* Papilioniform, caudal appendages long, acute. *Palpi* porrect, approximating, and meeting at their tips so as to form an acute cone: the whole covered with compact scales. Anterior feet small, slender, imperfect, the tarsal joints? concealed by long hairs: club of the antennæ terminal, sub-fuciform and cylindric. Body short, thick, robust.

Type, *Papilio Marius*. Auct.

SPECIFIC CHARACTER.

Wings above brown, with two unequal white bands; beneath white, with narrow fulvous bands; basal angle of the posterior wings with an orange spot, ocellated with black.

Papilio Cinna. Cramer Vol. 1. pl. 100. f. 8.

CRAMER describes this elegant Butterfly as a native of Surinam, and our own specimens were received from the same country. All the species of this group that have yet fallen under our inspection, are natives of South America. Their flight is high, powerful and rapid: the predominating colour on the upper surface of their wings is brown, and on the under white.

It is the misfortune of not understanding the typical structure, and the principles which regulate its variation, in higher groups, that in defining the characters of a lesser, we can form no just idea of its relative value: whether, in short, we should consider it a genus or a sub genus, or whether it is typical, aberrant, or osculent. This, however, is but a temporary evil; and will only continue until an insight is gained into higher combinations, by first placing together kindred species under one common name. If this be done heedfully, such a group *must* be natural, whatever opinions may be entertained in the *first* instance, as to its proper denomination.



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